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ORIGINAL LECTURES.

CLINICAL LECTURE
ON HEREDITARY SYPHILIS.

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GENTLEMEN,—At our last meeting we traced the life-history of a syphilitic babe from birth up to the twelfth or eighteenth month.

We have seen that our little patient was probably born with coryza and snuffles, the subject of various skin-eruptions, as the roseolous, papular, and pustular, and with mucous patches on the tongue, lips, and cheeks. We have also seen that the child has a peculiarly old, wizened, senile aspect, with a harsh, unpleasant cry or cough. The child has also exhibited a tendency to marasmus. It is at this time that most syphilitic babes succumb to their inherited diathesis; but, should they survive, a period of latency will commence, extending for a variable period, possibly to puberty or even later. If the disease is to become active, the earlier secondary symptoms are those referable to the special organs and tissues.

Syphilitic ear-affections are frequently met with,—not, however, usually discovered until the child is of an age to appreciate the loss of function. The hepatic structure may be invaded by the disease, shown by an increase in size and weight due to a proliferation of the connective tissue, producing a new fibrous growth and a general hardening. As a consequence, its secretion is markedly impaired. This syphilitic cirrhosis may be the only hepatic symptom that your little patient will present. It is among the most frequent manifestations of hereditary syphilis. You may meet a case of gummatous hepatitis, and in the liver you may find many minute nodules along the fibrous divisions, or you may note but a few large circumscribed tumors. These gummata may be found at birth or at about the tenth or twelfth year, generally the latter. The symptoms of syphilitic hepatitis, especially in an infant, are apt to be masked by the evidences of peritoneal irritation, or even of peritonitis, which may accompany it. The principal symptom would be increase in size of the organ and alterations in the performance of its functions.

An observer of acknowledged worth makes the following remarks in regard to syphilitic hepatitis: "The symptoms are null, or they are identical with those of local and general troubles so often observed in children who have poor or insufficient nourishment. The only physical sign which properly belongs to hepatic syphilis is, when it exists at all, increase in the size of the liver."

Diseases of the osseous system constitute a frequent and important manifestation of the syphilitic diathesis. Taylor's conclusions are about as follows. In the first stage we have a simple hyperplasia of the cells, with irregular deposition of lime salts; in the second, an intensification of this condition; and in the third, a new element,—namely, the abnormal proliferation of all the elements of the tissues, with an infiltration of granulation-tissue into the medullary spaces following the vessels."

The junction of the epiphyses and diaphyses are most affected, as it is here that the growing bone has its most active growth. The bone may be affected before the birth of the child, and the patient will probably be born with a swelling around or in the joint of one of the long bones.

The bones do not seem all to be equally liable to this syphilitic invasion. Those most frequently invaded are probably the radius, ulna, tibia, and femur. Several bones may be affected at one and the same time.

The swelling surrounds the bone and is regular in outline; synovitis may coexist. The process may be arrested in any of its stages; but, of course, if it has gone on to degenerative changes in the bones and cartilages, deformity will be present. Again, when there is no absorption of the new growth, an abscess may result, the bone necrose, and your patient succumb to the prolonged drain on his system. Rarely are the cranial bones involved; when so, the process seldom goes on to abscess-formation and bone-necrosis, but generally is arrested with the osteophytic

formation that you sometimes see on the heads of older children.

Just here I must warn you so that you may be on your guard, so as not to mistake the bone-changes of rachitis for those of syphilis. The differential diagnosis is not always an easy one, and much difference of opinion exists as to their relation. Some authorities consider syphilis as a cause of rachitis. In the case of rachitis, most careful investigation will not elicit any syphilitic prodromes; but you will discover a history of progressive loss of strength, excessive sweating,—as Sir J. Paget tells us, particularly about the head,—diarrhœa and gastro-intestinal disorders, which will make up a picture totally different from that which the syphilitic case will present. Again, the rachitic subject will present you a head the fontanels of which long remain open; the cranial bones will be thickened. Application of the therapeutic test will convince you that specific treatment is of no avail. This hospital almost always has several little patients who well illustrate syphilitic dactylitis, which always produces such marked alterations in the part affected. You may meet with one or two forms, one involving the periosteum and the tissues surrounding a joint, usually the smaller joints, as the fingers or the toes; is almost painless, slow in growth; causes swelling and discoloration of the affected part. The other form is an osteomyelitis with periostitis, and may destroy the part involved. The first variety rarely destroys the tissues invaded, but simply destroys their use for a short time. You may mistake syphilitic dactylitis for various non-specific affections, as paronychia, gout, rheumatoid arthritis, or even for enchondroma or bony exostosis.

The teeth present us interesting studies in hereditary syphilis, more especially as they bear so much on the diagnosis. It is impossible to consider this subject without mentioning Mr. Hutchinson. Indeed, the teeth are sometimes designated by his name. He considers that by far the most reliable among the objective symptoms is the state of the permanent teeth, if the patient be of an age to show them. The temporary teeth do not show such characteristic lesions, and Mr. Hutchinson does not consider that they present any diagnostic points worthy of general reliance. The central upper incisors of the second set are the "test teeth."

"In syphilitic patients, these teeth are usually short and narrow, with a broad vertical notch in their edges, and their corners rounded off. Horizontal notches or furrows are often seen, but they, as a rule, have nothing to do with syphilis." These, gentlemen, are about the words of Mr. Hutchinson, and I consider them of much importance to you as a valuable diagnostic aid.

The cause of these peculiar teeth is still an open question. Mr. Hutchinson is of the opinion that they are due to an arrest in the development of the central portion of the dentine.

Hereditary syphilis may show itself in enlargements of the spleen and liver. Indeed, the spleen seems to be somewhat enlarged in most cases of inherited syphilis at an early date. In many cases the spleen decreases in size as the child grows older, until eventually it is difficult to elicit any evidence of increase in splenic dulness. It would be rare indeed to meet a new growth in the spleen; the process is one of hyperæmia

Enlargement of the liver is generally present, although it is much more apt to resume its normal size than the spleen. Do not forget that the liver is proportionately larger in early life than in an adult. So many causes may operate in enlarging the liver that it is of doubtful diagnostic value.

The pancreas is so inaccessible to the art of physical diagnosis that our clinical knowledge of its diseases is somewhat hazy. A competent observer has noted the fact that in syphilitic fœtuses the gland may be enlarged, presenting proliferation of the connective tissue, which may and generally does cause compression and atrophy and fatty degeneration of the epithelium of the lobules.

Syphilitic disease of the lungs is a point of most engrossing interest. Children may have gummata deposited in the lungs, along the blood-vessel walls and the bronchioles,—usually about half a dozen, and confined to one lung,—or the bronchial glands posteriorly at the root may become enlarged and jeopardize life by pressure. Syphilitic phthisis may develop from a fibro-nuclear growth in the alveolar wall and around the smaller bronchi and pulmonary vessels. It is in this interstitial process upon the bronchial tubes that syphilitic phthisis differs from non-specific

phthisis. The symptoms are difficult to interpret correctly; they are very insidious and gradual in their onset. You may meet with a case of syphilitic pneumonia. You will then find the parenchyma in a state of lobular hepatization, or an entire lobe may be invaded. The part affected is dense and hard, the pulmonary pleura is inflamed and thickened. Cornil describes the process about as follows: the interlobular connective tissue enters into proliferation and presents a large quantity of embryonal cells, the alveolar walls are thick, while the narrow alveoli are livid, and even filled by epithelial cells, which are of the pavement-form in contact with the walls, round in the centre of the alveoli. As the process progresses, the epithelial cells become fatty, degenerated, and subsequently broken down and absorbed, while the embryonal interalveolar tissue rapidly organizes into fibrous tissue. Thus results a small fibrous tumor in which a gumma may develop.

The kidneys may be included in the general syphilitic taint. Bright's disease has been noted to arise coincidently with the outbreak of a well-marked syphilitic eruption. Gumma have been seen in the kidneys of children, or, again, you may find the organ fatty, enlarged, or having undergone degeneration.

The eye-symptoms of congenital syphilis are extremely interesting to the ophthalmologist. Interstitial keratitis will perhaps be the manifestation of the disease that you will most frequently note. Both eyes are generally affected, but one is usually involved first, the other taking part in the process some weeks later. The corneæ may be rendered very opaque, so that the little patient will be barely able to recognize day from night. These opacities will generally in time become absorbed, so that a fair measure of sight may be regained, though in most cases there will always remain some dimness of vision.

Involvement of the nervous system in the syphilitic process may be indicated in many ways,—either by a sudden paralytic seizure due to a rupture of some vessel in the cerebral circulation from specific degeneration of its coats, or the more slow symptomatology of brain-tumor due to a gummatous deposition made manifest by a series of functional and convulsive disorders, of which headache, epilepsy, and special paralyses would be indications.

Your patients will always be solicitous as to the prognosis of the disease, and in order to answer them intelligently it is of course necessary to have clear and correct ideas of its diagnosis. If the interval of infection of the parent or parents before conception have been short, the chances are that the product will have syphilis, and of a grave form. This is more particularly the case if the mother be syphilitic, although there is no reason to suppose that the disease is more virulent when received from the mother than from the father.

If your parturient patient gives you a history of frequent abortions, it is a point worth considering in making up your diagnosis.

The appearance of a syphilitic product is of importance. This has been fully illustrated in my first lecture.

The prognosis is in proportion to the virulence of the symptoms and of their appearance. Late hereditary syphilis is rarely of grave prognostic significance. On the whole, the prognosis of hereditary syphilis is generally favorable, always providing that some serious visceral lesion does not complicate the case. The prognosis when gummata of the brain, liver, or kidneys, for example, arise, is much more grave.

Dr. Blaise discusses the interesting question how far the syphilis of the parents may be manifested in the children in diseased conditions which are not usually classed among the regular manifestations of the disease. He agrees with Fournier that syphilis does so influence children, and that this indirect transmission can only be the result of a deep organic disturbance of nutrition, which may bring into existence new predispositions to disease or awaken old or latent predispositions. He instances the frequent early deaths of children of syphilitic parents, the children dying from simple lack of vitality, without any discoverable cause; the cases of imbecility and idiocy which, without doubt, may be traced back to syphilis of the parents (cases of Fournier and of Tarnier). Hydrocephalus has also been observed (Lancereaux). There have also been noted various forms of failure of development, either general or partial.

You may meet the *syphilis héréditaire tardive* of Fournier, which is that form of hereditary syphilis which shows itself either at puberty or in later years, whether

or not there have been signs of syphilis early in life,—*i.e.*, the *syphilis héréditaire précoce*, which shows at birth or shortly after.

By many, hereditary syphilis has been regarded as a disease of infancy, and all who have not fallen an early sacrifice to it have been regarded as cured and beyond it; and to Fournier again is due the credit for having thrown new light upon late cases of hereditary syphilis.

The treatment of congenital syphilis is an extremely gratifying study. You must treat the mother before and during utero-gestation, endeavoring to eradicate the disease before conception takes place, or, if she be pregnant when you are consulted, endeavor to modify the disease so that the product may have a reasonable chance for life and health. This may be accomplished by the daily use of a pill containing $\frac{1}{12}$ gr. iod. hydrarg. with charcoal. You of course know that to mercury and iodide of potassium we look for our best results in the cases. Remember that the mercury must be in such doses and exhibited in such form as to produce the minimum amount of irritation of the gastro-intestinal tract. In order to prevent abortion, it is well to give it either by inunctions or vaporization. If symptoms of great urgency, select the former. The bichloride of mercury, in doses of $\frac{1}{100}$ of a grain, may be used for a long time with great tolerance. Some practitioners administer it hypodermically. If you give mercury by the mouth, I would advise the combination with small doses of opium or belladonna. After the child is born, you may then treat it either independently or through the milk of the mother. In infants, after giving mercury for a time, you may give half a grain of iodide of potassium dissolved in a tablespoonful of breast-milk. To the mother the child is harmless; to every one else the danger of infection is great. The best method of giving mercury to syphilitic children is by inunctions, or by the oleate of mercury in small amount, and I know of no better means than by spreading mercurial ointment over the child's binder. In this way it will neither cause intestinal derangement, purge, nor affect the gums.

If, however, you desire to give the mercury by the mouth, I would advise mercury with chalk, especially in summer-time. Iodide of potassium may be exhibited in simple watery solution, or you may combine some bitter tonic with it, or, again, the mercury and iodide of potassium may be given together, combined with compound syrup of sarsaparilla. You must, of course, recognize the fact, and explain it to your patients, that the treatment should be continued for a long time after all symptoms have disappeared. In cases where the constitutional treatment must be prolonged, you may use iodine, exhibiting $\frac{1}{2}$ to i gtt. doses, with syrup or emulsion of cod-liver oil, or you may rub the abdomen with a mixture of cod-liver oil and iodine, a drachm of the latter to ten ounces of the former. The further general treatment of a case of congenital syphilis would be the same as in the acquired variety, increasing the dosage in proportion to the age of the individual.

ORIGINAL COMMUNICATIONS.

SOUTHERN FLORIDA: A WINTER SANITARIUM.

Read before the Philadelphia County Medical Society, February 24, 1886,

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THE facilities now offered to Northern tourists and invalids for reaching far-southern climes are so well adapted to comfort and ease of travel that the physician can feel justified in trusting the most delicate cases to the brief railway-journey necessary, which several years ago would have been wearing and fatiguing to the most robust. Indeed, a day and a night on a modern parlor- and sleeping-car is anything but an unpleasant experience, opening each moment new sights and, to the traveller from the North, odd customs of inhabitants of Southern States along the line of travel.

The study of climatology and the selection of sanitaria are of great importance to the physician; but, unfortunately, they usually receive but little attention from the practitioner. How often is the advanced invalid sent far away from his home and all that is dear to him, to be surrounded by strange sights and faces in a strange land, where he has been ordered by a physician who had not taken the trouble to look sufficiently into the matter in order to qualify himself to decide the important question as to which particular climate or

locality was the one best adapted to his patient's case! This has been well stated in a recent address before the American Climatological Association by Dr. John M. Keating, whose personal experience in climatology, gleaned from the climes of all nations, is second to none among us. In considering the matter of a selection of climate, Dr. Keating remarks as follows:

"How often have I met cases of advanced phthisis, away from all the comforts of home and its surroundings, dying in a strange land, sustained only by hope and the fact that they were carrying out the physician's order! I wish that my words could only be made sufficiently impressive to picture to you, as the subject comes up before me, the many sad cases I have witnessed. It is so very easy for the doctor, who possibly knows that all hope is ended and a fatal termination not very far distant, to say to his patient, 'Go to Algiers,' 'Go to Egypt, Australia, or California.' The poor, unfortunate patient is at once inspired with hope. His weakened frame is sustained by the nervous energy which is brought about by determination. The long journey before him is no obstacle. Its discomforts are discounted; and yet he scarcely reaches his destination before nature gives way. The journey to a foreign land requires a degree of strength that is often surprising even to a man in good health. The wear and tear, the vicissitudes of temperature, the character of the cooking, damp sheets, and the hard beds, are much more wearing than most of us imagine. Our Consul-General to Egypt some years ago told me that much of the business of the Consulate was the caring for the baggage of the consumptives who had been sent from home in the last stages of the disease, to run down more rapidly, and possibly die within two or three weeks of their arrival. One of the most shocking sights to the invalid travelling South is to run across the boxes with the death-certificate upon them waiting at the stations for the Northern train. Although I have the greatest possible belief in the value of the change of air and the residence in a suitable climate for those in the early stages of disease, or where predisposition exists, or during convalescence, I am strongly opposed to the method at present adopted of recommending places in a general way, regardless of their suitability and other matters as important as the climate itself. A physician should know thoroughly the place to which he is sending his patient,—be as familiar with it as with the drug he orders in his prescription.

"I met in a fog, on a ship in the China Sea, a young lady who had been recommended by her physician to New Zealand. When she reached there with her family, her condition was such that they determined to bring her home. They returned by way of China, and the dense fog they encountered increased the catarrhal phthisis, which was rapidly breaking down, until she was in a sorry condition. Had she been sent to Aiken or Thomasville, or possibly Bermuda or Santa Cruz, and surrounded by the comforts of life, in an equable climate, within a few hours of her own home, she certainly would have lived longer."

Among the many sanitaria which our varied climate brings within our command, South Florida pre-eminently suggests itself to the medical man in search of a winter-resort with a climate suitable for patients in need of out-door existence and a superabundance of pure, "unprebreathed" air.

The characteristics of the climate of South Florida are *mildness* and *equability;* it lies nearer the equator than any other of the States, yet extremes of temperature are usually unknown, the difference between the maximum of heat and cold being less marked than in any other part of this country. This applies more particularly to the southern part of the State, where frost is seldom found. The usual average daily temperature, it is said, does not vary more than twenty-five degrees, year in and year out.

There is probably no other region in the world where so many elements are present combining to make the climate mild and uniform as in South Central Florida, with Orlando and Winter Park as a centre.

Frosts do occur in Florida, and ice is sometimes found in the shallow waters which are much exposed; but this does not occur every winter, the present season of 1886 being a most unusual experience. For the Floridian south of Lake George, ice and frost would indeed be an unusual sight.

There is no clearly-defined "frost-line;" but the twenty-ninth degree separates the

region of damaging frosts from those that are extremely light.

We should bear in mind the fact that at the 29th or 28th parallel we must not expect the mild winter, the warmth and the sunshine of the tropics: for such we must either seek the tropics themselves or visit Southern California. Changes in temperature, rainy days and cloudy skies, will accompany the same conditions experienced in the North, though to a very much milder extent. These should be expected and prepared for. The absence of blinding snow, of heavy and continuous frosts, of biting winds, will enable the invalid to live in the open air.

If a patient wish to spend the entire winter South, he should choose the well-heated and comfortable hotels of Aiken, Thomasville, or Jacksonville, and remain there until he can be comfortably accommodated farther South.

People do not expect cold weather in the far South, as it comes but rarely, and when it does come the hotels are not prepared for it.

Cyclones and hurricanes never visit the State, nor do earthquakes arise, such as might cause more nervous prostration to a delicate patient in a few short moments than therapeutic skill can undo in months. Nor do the dwellers along the larger streams have to fear an overflow. Natural reservoirs have been constructed for the receipt of the immediate rainfall and for the drainage of the surrounding counties: hence the rise and fall of the rivers are automatically arranged by Nature's engineer. The water gathers in the lakes, these rise in their natural basins, and are again slowly reduced by the rivers.

It must be borne in mind that the entire State is now undergoing a most wonderful upheaval and improvement; marshes are being drained and cultivated, and thousands of acres are yearly meeting the husbandman's plough for the first time; yet, withal, fevers, especially malaria, are not at all frequent, except among those who systematically disobey all hygienic laws, drinking surface-water from creeks and living upon low and badly-drained lands, and continuing upon a basis of living and eating suitable only to cold climates. Some sections of the State are totally exempt from malaria, as those in the vicinity of the sea-shore, and also those in the high, dry pine-lands, with Orlando and its vicinity as an example. It is particularly in Orange County, of which Orlando is the county-seat, that the highest point above the sea is reached on the peninsula. Here you may find the pine-forests and a climate soft and even. This is the climate and the locality that I would particularly recommend for cases of phthisis,—in fact, for all thoracic affections; while for nervous prostration and neurasthenia in the aged it is perhaps the spot *par excellence*.

As an illustration of the mildness and equability of the climate of Orange County, I will quote from the report on meteorology: "In December, 1880, occurred the coldest weather known in Florida for fifteen years. On the coldest day the mercury at St. Augustine fell to 16°, at Jacksonville to 20°, at Palatka to 24°; at Orlando the mercury fell no lower than to 30°."

The writer has met many cases throughout Florida, but particularly in South Central Florida, healthy and vigorous, some of whom are physicians now enjoying large and lucrative practice, who several years ago came to this region as a *dernier ressort*.

It has also been my fortune to meet several men prominent in business and in public life, in fact shaping and giving character to the locality that we are considering, who, some years ago, came to Orlando simply as a last refuge from death.

The county is the most progressive region of a very progressive State. Some years ago—about fifteen—it hardly existed, save as a cattle-range with a very sparse population. Now it numbers 15,425 souls,—a gain since 1880 of 8807.

In this portion of the State is situated the famous lake-plateau, numbering one hundred lakes, along the margins of which people live in perfect health and comfort.

In Orange County no limestone is found; hence the drinking-water may be either supplied by wells or obtained from the clear, deep lakes. Thus the problem of drinking-water is again solved by nature. In some of the counties the residents must depend on rain-water collected in tanks for all their table uses.

The next important step is to consider the personal comfort of our patients during their Southern journey and the creature comforts that they will receive after their arrival.

The months of February, March, and

April, with us, are the most treacherous of the year; in Florida they are replete with all that is most conducive to the welfare of the invalid: this is the time when Florida is at its best.

Everybody coming to Florida by rail must stop at Jacksonville, and I would suggest that this be made the midway point. Let your patient here remain until he has entirely recovered from the wear and tear of his day-and-a-half railway-ride. Here will be found most excellent hotels, good drug-stores and physicians, plenty of amusement and avenues for mental diversion,—a most important, indeed an almost essential, factor in seeking health.

After this temporary breathing-spell, our patient will be ready to proceed farther down the peninsula, either by rail or by steamboat up the St. John River. The latter is the most interesting and instructive. The steamers are large, commodious, and comfortable. Berths can be secured for those patients too weak to sit about the decks and enjoy the ever-changing scenery. Many interesting towns are passed, and along the east bank of the river from Palatka to Little Lake George, a distance of twenty-five miles, fine residences and magnificent orange-groves in excellent cultivation are to be noted. On the opposite side, which is much lower, wild tropical plants and trees grow in profusion.

On entering Lake Monroe the patient is almost at the end of his river-trip, the terminus of the line being Sandford and Enterprise. Here I would again advise another halt in the journey. At Enterprise is to be found one of the best hotels in the South, where the invalid will find everything conducive to comfort. It is situated on one of the finest bluffs in the State; all tropical fruits are found in profusion; the hotel has a very fine orange-grove; indeed, the "Brock House Grove" is among the finest in this section of the State. The lands surrounding Enterprise are high, rolling, and well cultivated.

From here coaches run to New Smyrna, Halifax River, and its prominent points, where good hunting and fishing grounds are to be found; bear, deer, turkeys, snipe, ducks, and small game are found in profusion: so that our patient, if at all able to be about, will find plenty of amusement, and become enabled to set afoot the beneficial changes that may be expected to be derived from such an existence.

To continue his journey, he will be obliged to take train on the South Florida Railroad (the trunk-line of railway to Tampa) from Sandford, and after an hour and fifty minutes' ride will arrive at Winter Park, two hundred and twenty miles down the peninsula from Jacksonville, at which station will be found a small tram-car waiting to carry weak and sick persons from the station to the hotel, the "Seminole," a distance of about two and a half city squares.

The patient now finds himself excellently located upon high land, between two beautiful lakes, the ground gently sloping to either shore. From the promenades about the hotel nine lakes can be seen, bordered by graceful swaying pines and fruitful orange-trees.

Here, in the centre of tropical Florida, the invalid can sit and bask in the warm sunshine of Indian summer in our early spring, constantly breathing pure ocean air dried and impregnated with the odor of pine, drink pure, sweet water, and in fact find rest, comfort, health, and luxury. Many mental diversions are provided, tennis, croquet, bowling-alleys, billiards, good riding and driving horses, row- and sail-boats, steam-yachts running from lake to lake, with delightful walks among the old pines and orange-groves.

When we recall the fact that one-seventh of all deaths are annually attributed to phthisis in the United States, and that in Maine, for example, fifty per cent. of all deaths between the ages of twenty and forty years are due to this cause, the known failure of our therapeutic agents in this disease gives to the study of climatology renewed interest. That climate is a potent agent in the prevention of phthisis is demonstrated by the fact that certain regions show comparative immunity, consumption being extremely rare in the native population. Dr. Archibald Smith states, for example, that it is an exotic in the Peruvian Andes.

Damp, ill-drained land, cold, humid air, sudden changes of temperature, lack of sunlight, and anti-hygienic surroundings, all contribute to depress the general health and to occasion the fearful prevalence of phthisis in low-lying districts and in large cities. For instance, in New York the annual precipitation of rain and melted

snow is 42.70 inches, exhibiting at once one of the causes of large cities presenting such enormous phthisical mortalities.

Constant excess in the humidity of the earth and air predisposes to phthisical affections. On the other hand, dryness of earth and air gives to the residents of the locality under consideration comparative exemption from disorders of the respiratory tract. Laennec mentions a locality where the dampness of the soil was of such a character that two-thirds of the resident population died of phthisis.

When in search of a climate for the prevention or cure of consumption, dryness of air and soil and the invigorating influences of sunlight must be among the deciding factors.

As we see, South Central Florida is the region which presents us the most even climate, the largest proportion of fair, clear days, a sandy and absorbent soil, and the minimum amount of atmospheric moisture,—all the factors requisite in a perfect climate for the class of cases under consideration.

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NOTES OF THIRTEEN CASES OF TUBERCULAR MENINGITIS.*

BY J. H. MUSSER, M.D.,
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ALL of the cases were observed in private practice: hence the lack of detail of symptoms, such as temperature, etc. They occurred in a period of six years. Nine of them were in the writer's private practice, two in institutions under his care, and two in the practice of medical friends. It may be considered a disease of frequent occurrence, for the relative proportion of its frequency to that of many other diseases, as forms of liver-disease, is much in excess. The nine cases occurred in a practice ranging from fifty to four hundred families yearly during the six years. For every case of tubercular meningitis the writer has had twenty-five of phthisis. During the same period one case each of tubercular peritonitis and interstitial tuberculosis have been under his care. In later years the disease has been less frequently seen, corresponding with the social improvement of the practice. In the first half, six cases were observed; in the latter half, the remaining ones. The mortality-table of the "Homes" to which the writer has been physician present some interesting features in this connection. In one Home of one hundred and eighty boys, aged from three to sixteen, and thirty adults, but three cases of tubercular meningitis occurred in five years. In a Home for twenty-four colored children of both sexes, mean age seven years, the disease was not observed in four years. In a third Home, for children of both sexes (about eighty in number), in the records of twelve years no death occurred from this disease. During the same period of observation of these nine cases, five cases of hydrocephaloid disease, one of cerebro-spinal meningitis, and two of syphilitic meningitis were observed.

Causes.—Seven of the cases were males, and six females, making the sex of no causal influence. The ages ranged from seven months to fourteen years in twelve cases; one was thirty-two. Six of the patients were under five years, four between five and ten, and two between ten and fifteen. The ancestors of nine had tuberculosis in some form. In two other instances the children of the same generation had some tubercular affection. In only two cases was there no antecedent or coincident history of tuberculosis in the family. One of the patients, aged seven months, was nursed by a mother whose tubercular disease antedated her pregnancy.

The hygienic surroundings in the large number of cases were quite fair. Two alone could be pronounced as bad. One child had been weaned early in life and improperly fed. The previous health of all save one or two was bad. Some remote local inflammatory foci, either of simple or specific nature, could be determined. In one, aged fifteen months, the bronchial and mesenteric glands, after a whooping-cough or diarrhœa, were diseased; asthma and bronchitis, with enlarged bronchial glands no doubt, preceded in another; hip-joint disease, suppurating cervical lymphatics, chronic bronchitis, and phthisis, respectively, preceded in four cases; very poor health in one instance, and "weak" lungs in another, also preceded; in one the health had apparently been good; in two the state of the health was not noted; exposure to the sun was thought to be the cause of the twelfth, but the lad was

* Read before the Philadelphia Neurological Society, January 25, 1886.

always fragile, and had diarrhœas; the nursing baby completes the list,—she was always delicate.

Clinical Course.—In general, it may be said to be irregular. In six cases the periods of invasion, excitation, and depression could be traced. In two instances the stage of invasion, or the premonitory symptoms, was absent entirely. In the other cases the stages were "mixed."

The following summary indicates the mode of development of the entire series: Case I. was a girl aged 16 months; antecedent cause, whooping-cough and tabes mesenterica: slight general spasm, followed in a few hours by convulsion of right side of body, with aphasia. In Case II., boy aged 4, with asthma, etc., there was loss of flesh for four weeks, intermitting headache ten days, vertigo three days; was peevish and restless at night. Case III., girl, aged 10 years, had for one year headache and vertigo, extreme emaciation, cerebellar tumor. In Case IV. there were loss of flesh, debility, restlessness, and poor appetite for several weeks. The course of the fifth was not known; while the sixth had been ill ten days definitely; for a brief time loss of flesh, with pain in the left temple, sleeplessness, and constipation had been present. Sharp, paroxysmal headache tormented the seventh case, a youth of 9, for three days prior to the meningitic explosion. Until twenty-four hours before very active symptoms occurred, the eighth case, an infant under two years, was considered in perfect health. Prolonged lassitude, fretfulness, and some emaciation preceded the illness of Case IX., a boy of 8. For four weeks the tenth case, a precocious little girl 5 years old, suffered from symptoms not unlike malaria: languor, emaciation, fretfulness, irregular intermitting fever, restlessness at night, poor appetite, without vomiting or constipation. The eleventh case had phthisis, but observed that his customary hectic had quitted him two weeks before the development of headache and vertigo, which symptoms antedated the active brain-symptoms by four days. The twelfth case did not thrive as a nursing baby should, and vomited frequently; a convulsion was the first warning of cerebral trouble. A little girl lost appetite, was peevish, slept poorly, was feverish, and became emaciated for three weeks before the cerebral symptoms developed. She had lymphatic enlargement in the neck and abdomen. Emaciation, debility, fretfulness, night-restlessness, irregular febrile movement, disorders of the gastro-intestinal tract, and headache were, therefore, the chief premonitory symptoms. Emaciation was, it is seen, the most frequent and most marked.

An analysis of the phenomena of the first and second stages would be tedious and without practical value. Reference in the succeeding notes will be made to some salient groups of symptoms present more or less in both stages, and to peculiar manifestations of common symptoms. Headache, motor and sensory irritations, and palsies occurred in all the cases. In a few the headache was distinctly intermitting. The spasms and palsies of groups of muscles were irregular in respective cases as to order or frequency. Hourly change in the state of the muscles was common, and the same may be said regarding sensation. Not only does this apply to alterations of function of spinal, but also of cerebral nerves. Convulsions (partial, unilateral, or general), delirium, and coma were present at the usual period, but presented no peculiar feature.

Special Senses.—Total blindness was observed in one case, impairment of vision in five; optic neuritis was recorded in three. The state of the pupils was not of special import; in one instance there was irregularity of size in the second stage. In the first stage they were not affected, save contracted in one instance and fixed in a dilated state in another. Dilatation was the rule in the second stage. Nystagmus was observed in one case. Purulent conjunctivitis occurred in eight cases, in the second stage usually, and in two cases was unilateral. Ptosis was present in only one case.

In five instances local erythema and general flushings were noted. An urticaria-like rash was seen in three instances. In the later stages pallor or a bluish hue of the face was observed. A unilateral mottling of the extremities was observed. Emaciation was marked and persistent in the prolonged cases, nine in all. Fever was present in the first stage in seven cases, in the second in nine, intermitting in type, often with irregular paroxysms. Hyperpyrexia was noted in one. The pulse was slow seven times in the first stage, irregular or intermitting in four. In the second

stage it was usually quickened, small, rapid, and feeble; twice slow and irregular. It was never wiry or corded in either stage.

Vomiting occurred but three times in the first stage, once only in the premonitory stage, and once only in the final stage. Constipation was seldom observed: three times in the first, twice in the second stage. Diarrhœa was excessive once. Offensiveness of the breath was very frequent, and occurred chiefly in the last stage, but was so marked at first, also, in three cases, as to be noted. In the larger number of instances (nine) the tongue was heavily coated. The scaphoid abdomen occurred at varying periods: once in the first stage, seven times in the second stage; while three times it is recorded absent; twice there is no record. Respiratory symptoms: first stage, irregular or Cheyne-Stokes four times, rapid twice, slow once; second stage, Cheyne-Stokes twice, rapid six times.

Remissions of a decided character were noted twice: after the development of the most grave symptoms, a period of improvement led to hopes of recovery.

Duration.—Of premonitory symptoms: unknown, twice; prolonged, once; one year, once (tumor); in two cases, about four weeks; in two, ten days; in one each, three days and twenty-four hours; in two they were absent, and in two the first stage developed at once.

First stage: twelve hours, 2; four days, 2; five days, 2; ten days, 2; eleven days, 1; thirteen days, 1; unknown, 3.

Second stage: twenty-four hours, 1; seven days, 1; five days, 3; forty-eight hours, 1; six days, 1; eight days, 1; four days, 2; nine days, 1; unknown, 2.

Entire duration: thirty-six hours, 1; four days, 1; seven days, 1; twelve days, 2; fifteen days, 2; eight days, 1; fourteen days, 1; eleven days, 1; unknown, 3.

The difficulty of estimating the duration is evident to any one. It can only be said that a short first stage, in all the instances, determined a short second stage.

A post-mortem examination was held on four of the cases. In two the disease was largely localized, once in the cerebellar region, in another over the right frontal convolutions, the presence of the tubercle causing, during life, the symptoms due to localized cerebral irritation at these points. The autopsy also revealed, in the case of aphasia, etc., a well-known rule that the amount of gross lesion is not to be inferred from the extent of symptoms.

Summary.—Tubercular meningitis may be considered a disease (1) of frequent occurrence, in the middle and lower classes especially; (2) more common than other localizations of tuberculosis except the pulmonary; and (3) much more frequent than other varieties of meningitis.

Among the causes most prominent are age, hereditary predisposition to tuberculosis, poor hygienic surroundings, and insufficient and poor food.

The prime factor always to be looked for is the presence of a primary focus, inflammatory, tubercular, or "cheesy."

The important symptoms presented in this series of cases were, in addition to the usually noted ones: in the premonitory stages, emaciation, irregular fever, and gastro-intestinal disorder, without vomiting; in the succeeding stages, purulent conjunctivitis, erythemas and other vascular changes in the skin, excessive emaciation, fever, offensiveness of breath, the scaphoid abdomen, and changes in respiratory rhythm.

DIPHTHERIA WITH APPEARANCE OF EXUDATION ONLY ON THE GUMS, AND OCCURRING SUDDENLY AFTER RUPTURE OF A SEWER-PIPE.

BY S. J. RADCLIFFE, M.D.,

Washington, D.C.

MACKENZIE says that the exudation of *false membrane* is almost an invariable phenomenon of diphtheria, that false membranes may form in the course of the disease upon any part of the mucous surfaces which are exposed to the air, and that they occasionally cover the tongue and mucous membrane of the lips. Diphtheria may also occur under certain conditions of the system without any deposition of false membrane at all. In the following case the deposit appeared only on the gums, but was accompanied by symptoms of acute pharyngitis and other local and systemic phenomena corroborating the general indications of diphtheria, its entire demeanor and sequelæ also indicating the nature of the disease. Diphtheritic deposits are not usually confined to so limited an area, and, while there may be diphtheria without exudation, the rule is

that the surface embraced is more extended and the deposit more continuous, consecutive, and wide-spread, and involves parts more deeply seated, and may be out of the line of view.

The case was that of B. K., a maiden lady of about 40 years of age, in good circumstances, stout figure, fleshy, well nourished, but physically not strong; had suffered for some years from catarrhal troubles of the air-passages and weak lungs, and she believed she had a tendency to tuberculosis from heredity. She had suffered for several days before I saw her with sore throat, difficult deglutition, huskiness of the voice, some fever, and marked debility or general malaise. She was not one to yield to light ailments, but in this instance she felt herself ill and that she needed medical advice at once,—her symptoms and the mode of attack being, as she supposed, somewhat peculiar.

I was called to see her for the first time May 1, and upon the first casual examination her outward appearance seemed to indicate some eruptive disease, but this idea was soon dispelled by more intimate inquiry. I found her temperature 101.6°, pulse 112, her face quite flushed, which she said was not unusual with her in fevers, tongue coated, her urine a little cloudy, passed in moderate quantity, bowels loose, with anorexia and thirst. The gums, fauces, soft palate, and pharynx were deeply red and swollen, with slight œdema of the uvula and soft palate, roughness of voice, and constant desire to clear the throat.

Rhinoscopic and laryngoscopic examinations showed deep redness of the entire naso-pharyngeal tract, with puffiness of the entire mucous surface, the efflorescence tapering off by gradual extension into the larynx, and involving somewhat the vocal bands. The mucous membrane was dry, the follicles flattened from distention of the surrounding parts, with scarcely an elevated point by which they might be distinguished or isolated; the inflammatory condition extending also into the posterior nares, impeding free nasal respiration.

The second day the pulse increased to 128, and the temperature rose to 103.6°. The patient was very nervous and restless, and had had but little sleep. She complained very much of her throat, and particularly of her mouth. She could scarcely allow me to touch it for examination. On drawing back the cheeks from the gums I discovered a line of grayish-white false membrane embedded and filling up the space between the cheeks and alveolar processes, beginning at the last molars behind on each side, and extending anteriorly, nearly meeting in front, or quite as far as the lower canine teeth. The membrane was tough and adherent, and could not be removed by forceps or a soft napkin gently applied in the grasp of the fingers. If lifted from its bed and pulled it would stretch, but its tenacity was such that it would not yield to moderate force. No other evidence of membranous deposit could be discovered by careful examination by the mirror either on the fauces, tonsils, or in the pharyngeal space. The mucous surfaces were perhaps a little duller in hue, but the voice was still more husky, and at times without tone, amounting almost to aphonia.

May 3, the third day of treatment, the pulse was 120, temperature 103°. The membrane still adhered to the gums and sides of the teeth; it had not extended, but was not disposed to separate. The pharyngeal mucous membrane somewhat faded in general outline, but appearances indicated no material abatement in the disease. Her bowels were inclined to be loose, and she had had several movements in the past twenty-four hours. Her urine showed some cloudiness by heat, but not sufficient to point to any albuminuric complication.

On the fifth day the pulse was 110, temperature 101.5°, with no great change in the general condition of the patient. She was somewhat better, but she was very weak and exhausted. She could take no food, and therefore could not be sufficiently nourished. As she was inclined to diarrhœa, her diet was principally milk. Beef-tea or extract could not be given in any quantity. The false membrane had become detached in places, but still remained entire; it was tough and stringy and maintained its continuity, and was hard to dislodge. When raised, the surface below was raw and bleeding.

May 9, the ninth day of treatment, the pulse was down to 98, temperature 100.3°, and the membrane had nearly disappeared,—only a little of it remained posteriorly,—the disappearance being due partly to the persevering efforts of the patient to tear it away and partly to its disintegration; the bowels and urine in a more normal condition, but no decided improvement in general strength, and no appetite for food. Her voice-tone was still weak and frequently inaudible.

May 15. Convalescence had not been shown in so marked degree as desired, though there had been great improvement in the past twenty-four hours. She still remained in bed, and complained of great prostration. The line of inflamed surface from which the membrane had been detached was raw, and required some effort to prevent the contiguous surfaces from adhering. Pledgets of cotton in carbolized oil had to be inserted to keep the parts separated.

May 18. The patient had so far recovered as to require no further special treatment. Her pharyngeal surfaces had become nearly normal in appearance, and the inflamed gums had healed. Her voice was still low in timbre, indicating an atonic condition, but she spoke

with more force if she made an effort to do so. Regular visits were discontinued.

The treatment in this case consisted mainly, locally, in spraying the mouth and throat with Dobell's carbolized solution and solution of tannic acid and glycerin, and occasionally small pieces of ice in the mouth; and, generally, the administration of quinine, iron, solution of acetate of ammonium, sulpho-carbolate of sodium in full doses, and a few doses of bismuth subnitrate to correct the bowels, with free stimulation with milk-punch, brandy, or champagne as she preferred, accompanied by the usual fluid diet. For the partial aphonia, wine of coca seemed to have a very beneficial effect. The patient was visited twice daily for the first ten days, and a personal inspection and application made into all the details of treatment. Attention was given to disinfection and the prompt destruction of all cloths and other means used to cleanse the mouth or throat. She finally made a good recovery, after a sojourn for several weeks at the seashore.

Very great interest is attached to this case, besides its novel appearance, from the fact of its sudden supervention upon a known local cause. A sewer-pipe burst in the adjoining dwelling, flooding the cellar of that house, and the effluvia penetrated the walls and contaminated the air of the house in which the patient lived. Two days after this occurrence she was taken sick, and this period was the beginning of the illness that prostrated her. The cause and effect seemed to be too apparent to cause the least doubt or cavil as to the real disease in question.

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REVIEW OF THE PROGRESS OF MEDICAL AND SURGICAL ELECTRICITY.

BY WILLIAM R. D. BLACKWOOD, M.D.,
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ELECTRICITY IN GYNÆCOLOGY AND OBSTETRICS.

DR. PAUL F. MUNDÉ has given an elaborate paper, running through the columns of the *American Journal of Obstetrics*, on the use of electricity in gynæcology, which has attracted wide attention as coming from so distinguished an authority. The reviewer, in calling attention to the electrical treatment of dysmenorrhœa and other disturbances of the non-pregnant uterus some ten years ago, was astonished to note the want of intelligent comprehension of the subject evinced by those taking part in the discussion of his papers, and particularly in the instance of those whose experience as gynæcologists should have led them to careful study of the morbid conditions present. The lack of familiarity with scientific electro-therapeutics on the part of so many general practitioners, who must necessarily treat the majority of gynæcological cases, will, it is hoped, be remedied somewhat by the authoritative character of Professor Mundé's endorsement of electrical treatment. We have no doubt that one-half, if not more, of the uterine ailments treated by country physicians would fare better under electro-therapeutics than they do under the imperfect, not to say unnecessary, surgical management employed; and many city practitioners are on the same level. The conclusions drawn by Dr. Mundé are tabulated below.

1. Electricity, locally applied, is a valuable agent in gynæcological practice, and should be more widely used than it is.

2. It does not require special knowledge or experience as an electrologist to be able to use the agent safely and beneficially in gynæcological practice.

3. The remedy, if properly used and on correct indications, cannot do harm.

4. It should be used only in chronic conditions, and, if it is the galvanic current, should give no pain.

5. The conditions in which the faradic current is indicated are chiefly those characterized by deficient development or want of tone of the sexual organs, such as imperfect development of uterus and ovaries, superinvolution, subinvolution, amenorrhœa, uterine displacements, interstitial fibroids. The object of the faradic current is to stimulate the organs to increased growth or activity, and to produce muscular contraction.

6. The conditions in which the galvanic current is indicated are those in which it is desired to promote absorption of adventitious products, chiefly the result of previous inflammation, to allay pain, to excite reparative action, and occasionally to act as a caustic. The rapidly-interrupted galvanic current, however, also excites muscular contraction.

7. Perseverance in the treatment is essential to success.

8. Acute and subacute inflammatory conditions, as a rule, contra-indicate local treatment by electricity.

9. The pathological conditions in which electricity proves useful are those in which other treatment often fails or cannot be borne by the patient.

10. In organic diseases, a permanent cure or a restoration of the diseased organs to perfect health can usually not be accomplished by electricity, but great relief from pain and certainly temporary improvement in otherwise intractable cases can be achieved by it, without danger and with comparatively little discomfort to the patient.

We cannot agree with Dr. Mundé in his second point. Whilst, with care, mild currents (particularly faradic) will do no harm, very considerable experience is needed to use galvanism beneficially in stubborn and old-standing cases. It is just because hap-hazard methods are used that many failures result. Further, the doctor states that the *direction* of the galvanic current does not make much difference in his hands. Electrologists certainly do derive differing results in many pathological conditions: for example, in subduing hyperæmia. A direct, uninterrupted, *descending* current will relieve promptly uterine engorgement, when a reversed direction will not only fail, but, in ninety per cent. of all cases, will intensify the disorder. So also in neuralgic conditions, gynæcological or general, *direction* is all-important.

That electricity should be used only in chronic conditions is, we think, too restrictive. In many cases of acute metritis and metro-peritonitis, not only the suffering but the intensity of the inflammation has in our hands been notably relieved.

Dr. Starley, in *Daniel's Texas Medical Journal*, gives a résumé of his experience with electricity in gynæcology, and relies on it largely after an extended experimentation.

ELECTRICITY IN THE TREATMENT OF EXTRA-UTERINE PREGNANCY.

So many reliable reports of successful management of this terrible misfortune have appeared lately as fully to substantiate the value of either current in destroying the embryo in its abnormal position. Although the writer was not the first to report the transit along the Fallopian tube of an extra-uterine fœtation to the uterus through the unaided effort of nature, he does not know of any instance prior to that presented by him to the Medico-Legal Society in a paper subsequently published,* in which electricity successfully forced the fœtus a distance of fully two and a half inches within the tube before it reached the uterus,—an unlooked-for result, because the current was used simply to *destroy* the foreign body. Considerable adverse criticism followed the report; but another case is now given by Dr. Henry J. Garrigues, the prominent gynæcologist and obstetrician of New York,† in which faradism drove the body from the tube into the womb, and in which, as in my own, the life of the child was not destroyed.

In a case under the care of Dr. McBurney, Drs. Emmet and Thomas saw the woman in consultation and confirmed the diagnosis of extra-uterine pregnancy. Electricity destroyed the fœtus, which was delivered through the uterus.

A case of transfer to the uterus from the left tube (without electricity) was reported by Dr. Janvrin in the *American Journal of Obstetrics* (vol. xviii. p. 855, August, 1885).

As we go to press, another case is reported of extra-uterine pregnancy changed to intra-uterine by electricity, under the care of Dr. Augustus Stabler, of Lawrence, Massachusetts. (*Medical News*, February 27, 1886).

ELECTRICITY IN FIBRO-MYOMA.

Apostoli records upwards of one hundred cases treated, some by faradism, but the majority by as strong galvanic currents as were bearable. The tumors do not, it is stated, altogether disappear, but shrink to a small nodular point, and, in his experience, do not again enlarge. The anode is intra-uterine. In a case now under our care, a condensation of fully one-half is attained under two months' treatment, the applications being tri-weekly,—thirty cells; anode internal, cathode a small sponge rheophore firmly pressed over the myoma. This patient only lacked the fee to secure laparotomy, and declined a gratuitous exploratory incision proffered by the expert consulted.

* Medical Bulletin, May, 1885.
† Therapeutic Gazette, December, 1885.

TREATMENT OF PERI-UTERINE HÆMATOCELE, MENORRHAGIA, AND POST-PARTUM HEMORRHAGE.

At a recent meeting of the French Association for the Advancement of Science, held at Grenoble, a paper was presented by MM. Apostoli and Doléris upon a new method of treatment of pelvic hæmatocele by negative galvano-puncture. A double advantage is claimed for this procedure. The first is that, if the negative pole be used, a soft, non-retractive eschar is formed, and the resulting fistula remains patent for a sufficient length of time, while adhesions are formed between the pathological cavity and the mucous membrane. The second is that the electrical current causes a modification of nutrition and provokes a more or less rapid regressive action in the pathological formation. The puncture should be made as nearly as possible in the centre of the tumor, care being taken to avoid the uterus, intestines, or a large vessel. In order to determine the relations of the parts, a careful rectal and vaginal examination should be made. The current should be of the strength of one hundred milliampères, and the duration of its application should be from five to ten minutes. The Léclanché element is the one preferred by the authors. The negative pole is a trocar of medium size protected by a glass or caoutchouc sheath, and the positive pole a large cake of clay moulded over the abdomen or one of the thighs of the patient. Antiseptic precautions are used during the operation, and subsequently a strong solution of carbolic acid is injected twice a day into the vagina. The authors claim that by the use of this method a speedy cure of pelvic hæmatocele may be obtained, thus reducing very materially the gravity of prognosis. The operation should be performed at the earliest practicable period. The danger of the procedure lies chiefly in the liability of wounding a large vessel and giving rise to hemorrhage; but this can usually be avoided by a digital examination made to determine the situation of any pulsating arteries.

In a case of retro-uterine hæmatocele subsequent to a prolonged and difficult labor, we used electricity, but puncture was avoided, the rheophores being applied by the vagina and rectum, and the mass was reduced to about one-fourth the original bulk. From eighty to one hundred and thirty milliampères were employed from thirty to forty-five minutes daily for about six weeks. A combination of carbonate and muriate of ammonia was administered during the treatment by request of the family physician; but, to our mind, the curative result was entirely due to the current. The applications were painful when over ninety milliampères were given, but in a reported case of extra-uterine pregnancy a greatly stronger current provoked little pain beyond intense itching over the abdomen subsequent to the removal of the rheophores, which persisted for two hours. From the success here attained, we would hesitate to use puncture before fully trying the method we adopted.

In a series of nine menorrhagic patients excellent results have followed faradism applied just before the establishment of the menstruation, and again just prior to its cessation; and at the second month the treatment was begun one day earlier, and next month two days earlier. Both the onset and exit of the flow were attacked, and, as a consequence, three of those who usually were unwell for *seven* days prior to treatment were over the difficulty in *four* days after three months' treatment (six applications); three were reduced from six to four days; one from seven to five days; and two were not relieved. Severe associated dysmenorrhœa in three of the cases was greatly diminished, and in one it disappeared altogether. The latter case had undergone prolonged surgical and medical measures before coming into our hands, without any relief.

In this connection a case of severe post-partum hemorrhage may be mentioned, in which we used faradism, and it was readily terminated, after the failure of ice, hot water, massage, and ergot had led a friend to ask our assistance. One of the small pocket induction-machines now so common would add little to the weight of the obstetric bag, yet it would at times serve a good purpose.

ELECTRIC LIGHT IN SURGERY OF THE BLADDER AND RECTUM.

Dr. Robson, Honorary Surgeon to the Leeds General Infirmary, relates two interesting cases, one of which was that of a person supposed to have tumor of the bladder. Upon dilatation by Weiss's instrument, digital investigation located a hard, flattened, and nodulated mass close to the entrance of the left ureter. A small

(one-half candle-power) Swan electric lamp was introduced and energized by a Faure storage-battery. The illumination disclosed a bleeding surface, and enabled the exact application of an iron-perchloride solution. The hemorrhage and dysuria were relieved at once, no constitutional disturbance ensued, and the patient's general health was notably improved. The second use of the light was in locating a bleeding point after removal of internal hemorrhoids by clamp and cautery. The rectum was almost filled with blood, and nothing availed until the light disclosed the origin of the hemorrhage, which a ligature then controlled.

IMPROVED ELECTRIC OPHTHALMOSCOPE.

Messrs. Pickard and Curry, 195 Great Portland Street, W. London, have constructed, after a design of Henry Jules, F.R.C.S., Ophthalmic Surgeon to St. Mary's Hospital, a refraction ophthalmoscope carrying a single disk, nine convex and fifteen concave lenses from 1 to 20 and 1 to 30 dioptres respectively. The special arrangement using an incandescent loop is stated to be very satisfactory, and its cost is quite moderate. (*British Medical Journal*, February 13, 1886).

GALVANO-CAUTERY IN OCULAR THERAPEUTICS.

At the late Congress of Ophthalmologists held in Copenhagen, M. Nieden considered this subject in detail. He observed that the galvano-cautery was adapted to the diseases affecting the conjunctiva and the cornea, and especially to those in which there was evidence of a mycotic origin, such, for example, as trachoma, conjunctival xerosis, rodent ulcer of the cornea, and scrofulous marginal ulcer. In such cases it effects complete disinfection, as is proved by the clean surface of the base of the ulcer and the improved tendency to heal which is exhibited immediately after its application, the aqueous humor at the same time becoming clearer, the iris dilating, and any hypopyon that may be present undergoing absorption. It may, he thinks, in the majority of cases replace the operation of keratotomy, and, if perforation of the cornea is required, the incandescent loop can effect the opening of the anterior chamber through the base of the ulcer with ease. The instrument possesses the great advantage that its application is attended with very little pain; that it can be employed without an anæsthetic, without a speculum, and without assistance. Out of eighty-three ulcers that had presented themselves to him, one application of the galvano-cautery cured eighty-two, and three of these were rodent ulcer, and there was hypopyon in sixty-six. Ciliary neuralgia was rapidly dissipated. The duration of the treatment was thirteen and a half days for each case. (*Recueil d' Ophthalmologie*, p. 57, No. 1, 1885.)

Professor Waugh, of the Medico-Chirurgical College, finds the galvano-cautery serviceable in gynæcological practice, and illustrates his method by a number of cases, one of which was a cervical tumor which rebelled against the ordinary treatment, hemorrhage following any interference. The loop removed the growth, and no bleeding followed the operation.

ELECTROLYSIS IN NÆVUS.

M. Leplat recently exhibited a girl 8 years of age to the Medico-Chirurgical Society of Liège, who was afflicted with a large nævus covering the left temple, the lower lid, and a third of the upper lid of the same side. It was treated by galvano-puncture, and resulted in securing an almost normal condition. The pulsation of the mass was obliterated, the color was lightened; but from the employment of steel needles a number of depressed scars resulted, some white (negative pole), the others reddish-brown. In suitable cases platinum needles obviate scarring; but cosmetic results seem to be neglected in operations about the face by many Continental surgeons.

In a case of obstinate lead-palsy, Dr. Lopez Alonzo relates (*Revista de Medicina y Cirugia Prácticas*) the result attained by puncture after failure of the "strongest currents" to the skin in the ordinary way. It is difficult to conceive the necessity for the procedure in simple loss of contractility of the extensor muscles of the forearm, when we learn that in a few days the desired result followed electro-puncture. A fair knowledge of motor points, a little perseverance, a *moderate* current-strength, and the addition of massage would undoubtedly have secured the end in less than the time expended during a really painful procedure. The patient, we are told, returned to the work which caused his wrist-drop.

We have now under treatment at the hospital a severe case of "wrist-drop," in which *static* electricity has cured the patient in three previous instances. The man has remained free from trouble so long as he avoids his trade of painting; but, being expert and earning good wages, he has disobeyed the advice given and suffered in consequence. Nothing except electricity was used heretofore, and recovery has been rapid.

ELECTROLYTIC TREATMENT OF URETHRAL STRICTURES.

Dr. Newman gives an additional series of cases tabulated since we last adverted to the matter. In these none less than those three years under observation are included, and repeated examinations by himself or the family physician have decided the results as apparently permanent. He now prefers a bougie three sizes larger than the calibre of the stricture, used once daily, *not* oiled, and not introduced a second time at the same sitting. He does not state his experience in enlarged prostate, but we have had excellent results in several cases, the applications, however, requiring repetition once or twice a month after a fair amount of relief is first obtained. Reference here is made only to cases previously demanding constant catheterization.

ELECTRICITY IN DIPHTHERIA.

With no faith personally in local applications of any sort for removing and preventing the renewal of membranous exudation in the throat, we give the annexed as a possible assistant in this terrible malady. The procedure is based on the well-known fact that electricity will often modify the condition of indolent ulcers and prevent tissue-destruction. Faradism is credited by Dr. Clemens here, but we would hardly rely upon the induced current in preference to galvanism in destroying pathogenetic tissue or in stimulating nutrition. In some cases he uses chlorides, carbolic acid, iodides, etc., to moisten the rheophores, and in others water only, and he reports the membrane as being easily detached by the wire rheophore when applied to the exudation. He recommends two or more applications daily, which we imagine would be distasteful to the patient and troublesome to the physician.

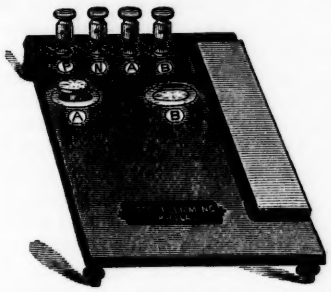
The application of the galvano-cautery is highly spoken of by Dr. Bloebaum in the *Deutsch Medizinal Zeitung*, and his views are supported by a further contribution from Dr. Tedeschi (*Rivista Venet.*). Stress is laid upon the assertion that no return of the membrane occurs after cauterization by this method, and the swelling of the glandular and connective tissues is promptly reduced, together with lowering of the fever. The membrane is readily loosened, and it curls up under light applications. Scabbing occurs, and in from one to three weeks the crust falls off, leaving perfectly healthy mucous membrane behind.

IMPROVEMENTS IN MEDICAL AND SURGICAL BATTERIES.

Mr. Flemming, of this city, the well-known electrical engineer and mechanician, has steadily advanced the excellence of his apparatus, and we advert to two results of interest particularly to the general practitioner, especially to gentlemen distant from large cities, where access is easy to the maker should a break-down occur. A compact yet really serviceable universal battery of sufficient power for ordinary use has been not only a desideratum, but a difficult object to attain heretofore. Some years ago his combined batteries were produced, but recently the problem of consolidating within a moderate space galvanism, cautery, and induction has been thoroughly accomplished. The commutator for coupling the battery in quantity or intensity as desired is simple but very effective, and, after very thorough tests, we are satisfied that some very troublesome characteristics of combined batteries are now eliminated. The usual size of apparatus comprises twenty cells, with all necessary adjuncts to either current. One special excellence is the ability to maintain an electric lamp of sufficient candle-power for any use without resorting to unreliable secondary or storage cells, and the incandescent loop is as well maintained in air as in vacuo, for cautery or electro-puncture. Simple mechanism immerses or releases the plates at will, and sizes up to sixty cells, if desired, can be constructed.

An exceedingly handy adjunct is the pole-changer shown, which has the advantages without the defects of former pedal attachments. Either current is controlled by the foot, leaving the operator free to use his hands. We have found the value of the accessory in epilation by electrolysis, because many patients are timid and

embarrass the operator if the "make and break" is left to them, both his hands



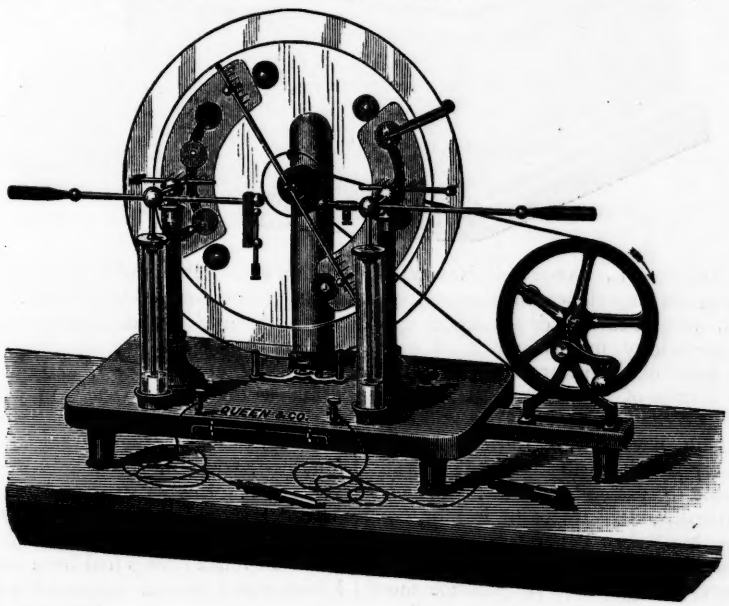
being employed. When a magnifying lens is necessary, the utility of the apparatus is evident.

STATIC ELECTRICITY—IMPROVED MECHANISM.

A number of cases of paralysis of varying type have been under observation in our private practice, and in all the result under static electricity has been satisfactory. In an instance of monoplegia which had resisted galvanism and faradism thoroughly tried for many months, six weeks of moderate static applications have so far removed the paralysis as to enable the use for most purposes of the hand and arm. The instance of lead-palsy referred to on a previous page illustrates happily the advantage of high-tension currents in wrist-drop, and it is supported by a number of private cases in which equally good results were thus obtained.

As a therapeutic measure Vigoroux employs this form very extensively, and his clinics present a series of cases quite diverse in character, yet the success attained in his treatment is steadily maintained. The first report of the reviewer's experience with static electricity* can now be largely supplemented, and the high value set upon it in his original report has not diminished during the time which has elapsed. The mechanism then illustrated has been improved by several manufacturers, but Messrs. James W. Queen & Co., of this city, maintain pre-eminence in the character of their Toepler-Holtz. Based originally upon a good idea, they have not only simplified the apparatus, but enhanced its value in many respects, particularly in strengthening all moving parts, and in securing complete adjustment and alignment of the plates. A device just completed by Mr. Richardson, electrician to the firm, enables the direct current to be taken from the sliding-rods. The binding-clamps between the large ball on the Leyden condenser and the small one on the sliding-rod on the right (as seen in the illustration) is fixed, but that on the left is

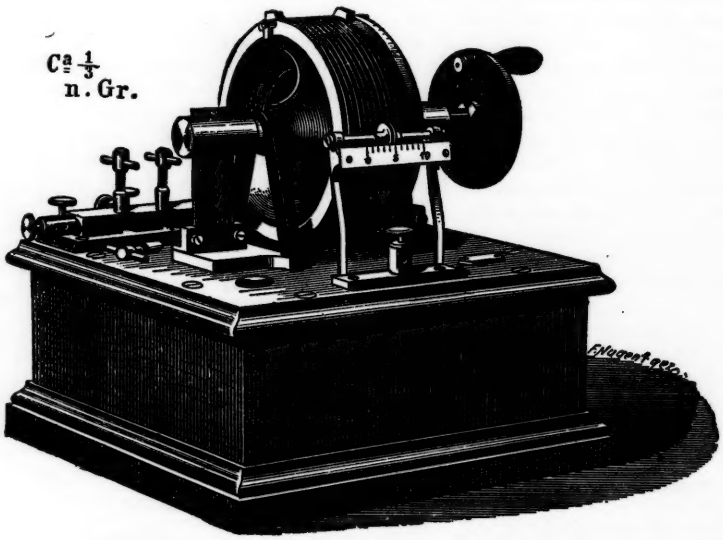
* Proceedings of the Philadelphia County Medical Society, vol. iv. pp. 15–24.



adjustable vertically, and any length of spark, from a hair's breadth in length to some three inches, is graded at will. The secondary induction is gotten at the posts on the base, the connecting-bar being removed. The cut shows the rheophores in place for this effect. Failure to obtain good therapeutic results has heretofore been largely due to defective mechanism, but the efforts which have produced this machine remove the difficulty and leave nothing to be desired. Their twenty-inch machine is fully up to the requirements of general practice.

In amenorrhœa static electricity is reported by several Continental authorities as gaining ground, but we presume its value is fully known in this direction to American electricians.

In cases where a variable measured resistance is desired, which can be raised from zero to any degree needed without break, the Wheatstone-Kirchhoff Bridge contrived by Professor Kohlrausch is an admirable instrument. It operates on the sliding principle, and bears the same relation to the ordinary plug-rheostat that a trombone does to brass instruments, or a violin to string instruments,—that is, the resistance progresses by infinitesimal degrees, and not by tens, fifties, or hundreds of ohms at once, as in ordinary coils. In using galvanism, for instance, in extra-uterine pregnancy or in testing for the reactions of degeneration, in applications about the head, or in laboratory-work, the value of this instrument is great, and we call attention to it after learning its worth, Messrs. Queen & Co. having kindly placed it at our service for experimentation.



Dr. Ambrose L. Ranney, of New York, in giving his experience in electro-therapeutics, reiterates his dependence upon static electricity in preference to other forms, particularly in treating neuralgia. In the course of his lectures at the University of Vermont, recently, he said,—

"I have lately come to regard static electricity (franklinism) as more generally applicable to spasmodic conditions (hysteria, torticollis, blepharospasm, tremor, contracture, etc.) than either faradism or galvanism. It seems, in my experience, to act more promptly and to produce more lasting results than the methods more commonly recommended by authors. I would advise those of you who decide to purchase a static machine to try the effects of insulation, the 'electric wind,' and the indirect spark (as the circumstances may indicate) faithfully before you resort to galvanization or faradization. If good results are not obtained, you can easily substitute for it the other forms of treatment at a later date. I should never regard any case as hopeless until it had been thoroughly tried (after all reflex causes had been removed). I have cured several severe cases of tonic

spasm of the muscles of the neck in a few sittings by means of the indirect spark, and relieved many cases of suffering from other forms of spasm in a short time.

"Rockwell's method of employing 'central galvanization' in epilepsy does not, to my mind, equal in beneficial effects the use of static insulation and the drawing of indirect sparks from the neck and back of the patient. It is my custom, however, in some cases to employ both of these procedures, each being used alone during alternate weeks for a period of two or three months with daily sittings.

"In chorea I have obtained the best results with static insulation and sparks."

He also finds static applications valuable in sciatica, and refers to cases not only relieved at one sitting, but now and then cured. Our own experience leads us to rely upon galvanism specially in this affection, although insulation and the "indirect spark" is often serviceable in reducing the suffering temporarily. The "electric wind" we believe to be refreshing in "nerve-tire" and muscle-weariness, but we do not find it of notable service in actual neuralgia. In some instances of insomnia it has acted happily, and in saving weak stomachs from morphine or chloral this point is worthy of notice.

A NEW METHOD OF RENDERING THE LÉCLANCHÉ ELEMENTS PORTABLE.

M. Guérin, in *La Nature*, describes his method of using agar-agar for gelatinizing the solution of this element (or any other single fluid element, we think) and thus rendering spilling impossible. The internal resistance is heightened slightly, which is no drawback. The jelly works apparently as well as the usual liquid, and for some purposes the novelty may be an advantage, as it is difficult to keep cells water-tight, no matter how well sealed they may be originally.

THE GALVANIC TASTE.

A discomfort to many persons who require galvanism about the face is the persistent copper-taste. In several instances of exophthalmic goitre in which one rheophore was placed in the auriculo-maxillary fossa this complaint was made, and we remember one instance in which electricity was discontinued solely because of the "galvanic taste," which was several hours in subsiding. Dr. Leslie Phillips, of Birmingham, England, has discovered the fact that coffee chewed for a short time will remove the discomfort, and we can confirm his statement after due trial. From the well-known efficacy of the fumes from burning coffee as a deodorizer, it is singular that no one found this out sooner.

246 North Twentieth Street.

TRANSLATIONS.

Regeneration of Tendons by Grafting.—MM. Fargin and Assake, with the view of ascertaining the best surgical method for obtaining regeneration of tendons which have been shortened by wounds or operations, tested on animals the method Gluck had applied to human subjects: the two extremities of a cut tendon were joined together by a bridge of catgut threads. MM. Fargin and Assake excised a portion of a rabbit's tendo Achillis and filled up the hiatus with catgut threads, rigorously observing all antiseptic methods necessary to insure reunion by first intention. After the operation the animal slightly dragged the paw operated on. It was killed on the forty-ninth day. On examination, it was observed that the catgut threads were replaced by a fibrous production, and its structure closely resembled that of a tendon without being identically the same. Another animal was operated on in the same way, and was killed one hundred days subsequently. It was observed that the newly-formed tendon was further advanced in structure than the one in the preceding experiment. In both instances the catgut threads were absorbed, and evidently promoted the regeneration of the tendon. Encouraged by this success, these authors made further experiments. They substituted portions of tendon for the catgut. In one series of experiments the tendon grafted was taken from an animal of the same species as the one operated on; in another series, from animals of a different species. They grafted on a rabbit from the tendons of a sheep, of a dog, duck, fowl, and turkey, and *vice versa*. They observed that reunion by first intention took place rapidly, notwithstanding the difference in the zoological order of the animals. These results evidently warrant surgeons in adopting the method of animal-grafting. When reunion by first intention is impossible, and the loss of tendon-sub-

stance must be replaced by a substitute, the chance of success will be greater if the tendon used for grafting is chosen from an animal the nearest to man in zoological order. Rigorous antiseptic measures are indispensable.

TETANUS CONFINED TO THE HEAD.—Dr. Hadlich reports a case (*Berliner Klinische Wochenschrift*, No. 17, 1885) of a child, 2½ years of age, who, twelve days after receiving a superficial wound of the right cheek, presented the first symptoms of a peculiar neurosis. Paralysis of the right facial nerve appeared, and in the course of four or five days trismus developed, but it was not until the eighth day after the beginning of the facial paralysis that tetanic spasms occurred. The presence of spasm in the area of distribution of the paralyzed facial nerve was a striking symptom in this case. There was observed tonic contraction of the right orbicularis palpebrarum, as well as of the orbicularis oris and levator alæ nasi, giving the face of the child a peculiar drawn expression. These symptoms came on slowly and disappeared gradually, but the face was drawn to one side for a considerable time. Cramps of the throat-muscles were not present in this case: so that the name of hydrophobic tetanus, as suggested by Rose for this condition, does not seem applicable. Of the sixteen cases on record thus far, only five have recovered, this being the youngest.—*Centralblatt für Chirurgie*, No. 44.

LESIONS OF PERIPHERAL NERVES IN TYPHOID FEVER.—MM. Vaillard and Pitres have, on several occasions, demonstrated that in typhoid fever peripheral nerves may present diffused lesions resembling parenchymatous neuritis,—breaking up of the myeline proliferation of the nuclei of the interannular segments, and more or less atrophy of the nerve-fibres. These alterations have been observed in three patients dead from typhoid fever: they all died without presenting any symptoms of nerve-lesions. At the necropsy of one, the brain-meninges, spinal cord, and the roots of the spinal nerves were healthy. The musculo-cutaneous nerves, the internal brachials, and the terminal branches given off by the ulnar nerves presented lesions somewhat limited in superficial area, but extending deeply into the substance of the nerves. At the necropsy of the two others, the nerves of both the lower limbs and some of one of the upper limbs presented serious and extended lesions. In a fourth subject the superficial nerves were attacked with parenchymatous neuritis.

PYOCYANIC AFFECTION.—At a recent meeting of the Paris Biological Society M. Charrin stated that he had inoculated some rabbits with a few drops of pyocyanin, and thus determined an affection which presents two clinical aspects, one acute, the other chronic. The principal morbid feature is albuminuria. This is followed by diarrhœa, retention of urine, ophthalmia, and paresis. When, after inoculation, a portion of the animal's spinal cord or a small quantity of its serum is cultivated in broth, the presence of pyocyanin is detected. When the micrococci contained in the cultivation-fluid are removed by filtration, an enormous quantity must be used in inoculations in order to provoke a pathological condition. Thus it may be concluded that the toxic principle of pyocyanin resides in the microbes, and it is manifested by certain lesions, such as nephritis, enteritis, etc.

BROMHYDRATE OF PELLETIÉRINE.—M. Galezowski read a paper before the Académie de Médecine on "The Action of Pelletiérine on the Motor Nerves of the Eye." His researches are based on the ocular disturbance which occurs in subjects who absorb pelletiérine: they are affected with diplopia. The observance of this fact induced M. Galezowski to prescribe pelletiérine when there is paralysis of the third and sixth pairs. Iodide of potassium and blisters have failed where pelletiérine has cured. The preparation used is syrup of pelletiérine,—one gramme per one hundred and twenty parts of syrup. From three to six doses were administered. Unfortunately, this substance is excessively dear. M. Galezowski hopes to meet this difficulty by administering pelletiérine in subcutaneous injections.

SALICYLATE OF LITHIA IN RHEUMATISM.—Professor Vulpian recently read a communication to the Académie de Médecine advocating the use of the lithia salt of salicylic acid in the treatment of articular rheumatism of subacute character. It is efficient in smaller doses than the corresponding sodium salt.—*Bull. de Thér. Méd.-Chir.*

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, MARCH 6, 1886.

EDITORIAL.

BANE AND ANTIDOTE.

THE time probably will never come when physicians by common agreement will confine themselves to the officinal drugs of the Pharmacopœia and their extemporaneous combinations when writing prescriptions; but should that day ever dawn, many purveyors of proprietary preparations will find their occupation gone,—greatly to the relief of a much-abused and long-suffering medical profession. Nearly every mail brings pseudo-medical journals published in the interests of enterprising manufacturers, monographs lauding certain articles to be obtained only from a single source, specimens of proprietary pills and powders, circulars, price-lists, and cards beyond number. Nearly every day the ubiquitous gentleman with a black satchel drops in at your office-hour, and, if permitted, will commit a grand larceny of your time while he grows eloquent over the superior merits of his wares as compared with any other remedy in the shops, whether proprietary or officinal. Or perchance he has some valuable work to be sold by subscription only, published in one hundred parts, and he is so obliging as to permit the subscriber to take one every two or three months, just as it suits him, feeling certain that the mind of the victim will be so engaged with the financial problem that he will not be able to work out the simple question in mental arithmetic as to the probable period when he will have the pleasure of holding the completed work in his hands.

With these two classes of visitors the patience and politeness of the physician are often severely tested. Experience shows that the interview may be terminated very briefly by informing the visitor, as blandly as possible under the circumstances, that you are as fully acquainted as you desire to be with the merits of his goods and do not care to have any samples. The little expedient of receiving such visitors standing, and with occasional glances at a timepiece, has been observed to expedite matters very decidedly; but he who stops to parley is lost, and he who sits down to listen has himself to blame if the interview be prolonged. However, there are occasions, when patients are few and the claims of practice not too exacting, when a visit from a gentlemanly drug- or book-agent may not be unwelcome, and some entertainment, if not information, may be obtained from his discourse, which, we are bound to admit, is almost invariably polite and deferential.

The same remark will not apply to the tone of medical circulars, which vary from the insinuatingly suggestive to the patronizingly dogmatic. Not only is the reader informed as to the merits of the remedy, but its therapeutical indications are pointed out, and the imperative duty of employing the especial preparation under consideration is laid upon the conscience of every prescriber.

We have before us such a communication, which is ingenuous to a degree that would be amusing were it not for the tone of insolent familiarity with which it addresses the profession upon the nature and treatment of disease. But the acme of effrontery has been recently attained by a New York firm, which has broached a scheme by which physicians are invited to sign a formal contract to employ its manufactured proprietary medicines as much as possible, and, in consideration of having thus ordered a certain quantity, the party of the second part agrees to pay a stipulated sum of money (fifty dollars) to the physician, who thus becomes merely the tool of the drug-manufacturer. It is

not supposed that many physicians will be found who would be tempted to place themselves in so dubious a position, with the certainty of exposure staring them in the face; but the very fact that such a scheme has been promulgated is an indication of the slight esteem in which the profession is held, at least in certain quarters. At present the profession seems quite defenceless against such insults; but it is hoped that when merchants find that enterprises of this kind are resented they will adopt a different course. Especially will they see the necessity of doing so if they find the former one unprofitable.

THE NATIONAL BOARD OF HEALTH BEFORE CONGRESS.

ALL concede that we should have an efficient National Health Service. It is universally acknowledged, too, that the National Board of Health has already rendered incalculable service to the country, and is able to continue that service if the necessary legislation and means are supplied by Congress. The lapse by limitation of the law of June 2, 1879, leaves the country without any law by which the government can co-operate with State and local Boards of Health in preventing the introduction and spread of epidemic diseases, except such clauses as may from year to year find their way into annual appropriation bills. Such temporary legislation is not in keeping with our standing as a nation. We should have permanent legislation, and be upon a par in sanitary matters with other first-class nations. In the matter of legislation very little improvement can be made upon the law of June 2, 1879, which by mistake was made to continue in force but four years. It contained ample provision for co-operation in times of great emergency, and for carrying forward the most useful sanitary work during periods of freedom from epidemic. The work done by the Board during the time that law was in force will stand, and will reflect lasting honor upon the nation. Leading sanitarians of Europe generously credit the Board with having, in its investigations, contributed more to our knowledge of the propagation of epidemic diseases than perhaps had ever been accomplished before.

No questions can be of greater importance than those affecting the health of the people, and the work so well begun by the Board should be continued. The possibility, too, that cholera may at an early day make its way to this country should command for the subject immediate attention. It will require time for the Board to perfect plans for the co-operation of local organizations and communities, and Congress should pass the necessary laws at once. State and local boards cannot in this day manage epidemics alone, and the Board has shown that with its aid epidemics can be speedily suppressed. It is hoped that every medical journal in the country will begin the discussion of this question at once, and urge its patrons to press its importance upon their representatives in Congress until permanent legislation, by which the Board can continue its beneficent work, is secured. If during the coming summer cholera breaks in upon us unprepared, the reponsibility will be partly ours if we now fail to bring the subject to the attention of Congress. Let, then, the question be agitated from one end of the land to the other, until our representatives are impressed with the importance of the subject and fully understand the wishes of the people. Then will the National Board be able to continue its work, and we shall have a National Sanitary Service which will be of lasting benefit to the country.

Drs. Wood and Formad did most valuable service to the country in their investigations conducted for and under the direction of the Board, and all who are concerned with the practical solution of

great problems in state medicine should naturally feel interested in having such work continued.

A PROPOSED ASSOCIATION OF PHYSICIANS AND PATHOLOGISTS.

AT preliminary meetings held last October and December in New York City, it was decided by those present interested especially in pathology and clinical medicine to organize an association having for its objects the advancement of studies in these departments of medicine in this country, to limit the membership to one hundred, and to hold an annual meeting in the month of June in the city of Washington. It was also decided to hold the first meeting on Thursday and Friday, the 17th and 18th of June, 1886, under the presidency of Dr. Francis Delafield, of New York City. During the past month the committee to whom the duty was intrusted have issued a circular-letter which has been sent to those who were selected as original members, the committee consisting of Francis Minot, M.D., Boston, Chairman; William H. Draper, M.D., New York; William Pepper, M.D., Philadelphia; R. Palmer Howard, M.D., Montreal, Canada; Alfred L. Loomis, M.D., New York; William H. Welch, M.D., Baltimore; Francis Delafield, M.D., New York; James Tyson, M.D., Philadelphia, Secretary of the Committee. It is understood that a sufficient number of replies have already been received to insure the success of the meeting.

HOPEINE.—An enterprising manufacturing firm sent to one of the prominent therapeutists of Paris a preparation which purported to be an extract of a peculiar species of hops growing in Central America, and experiments were thereupon made and published upon the valuable narcotic virtues of "hopeine." Recently, however, an analysis was made of it, with the result of demonstrating that it consisted of morphine flavored with hops, and it was so reported to the Société de Thérapeutique by M. Petit.

NOTES FROM SPECIAL CORRESPONDENTS.

PARIS.

CLINICAL Observations on Heart-Disease by Jaccoud.—Professor Jaccoud, of the Paris Faculty of Medicine, no longer continues his didactic lectures at the school, but devotes his whole attention to his clinics at the Hôpital de la Pitié. His numerous works include an immense Dictionary of Medicine, in some thirty-eight volumes, which is much appreciated in France, and last year one of his books on pulmonary troubles was translated into English. We give some details of a late interesting clinical lecture that he gave on "Cardiopathy," or heart-disease, considered in general.

"I am going to make a parallel before you to-day of two patients who are in the Laennec ward, both of whom are suffering with heart-disease. I take this opportunity, as it is rather a rare thing to find two cases that are capable of giving so much instruction. The woman you saw in No. 1 bed is about 75 years of age, while the one in No. 36 is 70: both of them are strong, and of a good constitution, and both are hard-working women who go out by the day. As to their antecedents there is a slight difference; for No. 1 has hardly any medical history, as far as we can learn; only had a slight intermittent fever at seventeen years of age, from which she recovered promptly. No. 36 has a much more complicated history: some twenty years ago she had a violent attack of hepatic colic, but this is not of present importance; later she had pains in the articulations and her spinal column; this detail permits us to think of a rheumatic predisposition; further, some three years ago she had an erysipelas of the face; finally, she had, two years ago, what she calls a sort of 'heart bronchitis,' which interfered with her respiration; for us there is here the first indication of cardiac trouble following an accidental bronchitis, but we must also keep in mind the rheumatism and the erysipelas.

"The circumstances that brought these two women to the hospital are different. No. 1, when in good health, a few months ago, noticed that she had the lower part of her legs swollen, particularly at night; this continued for two months, and then it occupied the whole of the lower members and became permanent. At this moment it is now nearly up to the angle of the scapula; but with all this she has never suffered any annoyance except from the mechanical effects of the swelling. The other one, some six weeks ago, suddenly and without any reason found that she could not go up-stairs without feeling great oppression; a few days later she had the same feeling even when walking on the level, and a day or two later she found her legs swollen, and came here for relief.

"Now as to their actual state. In No. 1 the augmentation of the heart is but little noticeable. On auscultation, we can hear murmurs all over the region of the heart: they are strong, rough, and grating in character. The one heard at the point of the heart is the weakest, that of the right second intercostal space is stronger and slower, and it seems to pass towards the other side. There is a third *souffle* in the region of the xiphoid appendix: this is hard, intense, and grating, more so than the others. These murmurs are all systolic. In the neck there is a venous stasis in the external jugulars, and the peripheric arteries are atheromatous: the last symptom is readily explained by the age of the patient. The pulse is remarkably regular for a heart that is apparently so seriously involved.

"No. 36 gives a quite different clinical picture. Here the pulse is quick, small, and irregular, ranging from one hundred and four to one hundred and twelve, and the exact figure is very difficult to give, as it varies so quickly: auscultation allows us to appreciate the disturbance of the heart's function, but at the same time there is not the slightest vestige of a *souffle*, and the œdema is very slight in this case.

"The state of the lungs in our two patients is quite different also. In No. 1 there is no perceptible respiratory trouble, with the exception of a few râles at the base of the lungs, evidently the result of the œdema and from the fact that she is lying down in her bed. In No. 36 there is a persistent dyspnœa, with râles in the lower half of each lung: she cannot lie down at all, but sits in bed with her head raised. As to the liver, there is the same contrast: No. 1 small, and No. 36 enormous, passing below the umbilicus. The spleen is enlarged in both cases, and the kidneys are altered. They both pass from three hundred and fifty to five hundred grammes (one pint) a day of a urine which is heavily charged with urates and a little albumen.

"It is no trouble for you now to diagnosticate two very serious cases of heart-disease; but is the gravity of these cases equal?

"It is a great error to suppose your diagnosis made when you hear an organic *souffle*, and to imagine that you have now only to find its seat and rhythm to locate the valvular lesion. *Let me assure you that the absence of a murmur does not exclude valvular lesion, any more than the presence of one indicates it.* And we have in these two cases a proof of this; for No. 1 has no lesion and plenty of murmurs, and No. 36 has no murmurs, but a very serious lesion.

"In applying the rough explanation of what we hear in the first case, it would be: systolic murmur at the apex,—therefore mitral insufficiency; same at the base,—aortic narrowing; the murmur at xiphoid,—tricuspid insufficiency. So that she would have a triple valvular lesion. But you have no right thus to make an abstraction of your medical judgment in transforming yourself into a stethoscope. Does the general state of this patient permit such a conclusion? I do not think so. First of all, I cannot find in her antecedents any malady capable of causing endocarditis. I know in aged persons it may develop itself spontaneously; but here is a case where the digestion is good, the respiration also, and it is only the œdema that prevents her going home at once; and yet, from the sounds, one would be ready to give her a triple valvular lesion. It is not at all probable.

"'Well, then,' you will say, 'why these murmurs?' The explanation is simple enough. You have only to consult the arteries, and you will soon be aware that there is a general atheromatous condition. Why should the endocardium escape this condition? It cannot escape this alteration any more than the rest of the body, and it will be thickened in a diffuse manner all over it, besides at the orifices, and this is the cause of the murmurs. Why is there this progressive dropsy? Well, I have not said that the heart is healthy. I believe that the œdema depends on the functional insufficiency of the myocardium, or the muscular structure of the heart itself. I think that the coronary arteries have been atheromatous for some time, and that the heart's substance has been badly nourished. Finally, the age of the patient allows us to suggest senile degeneration; but there is no proper lesion of the heart.

"The other woman presents, on the contrary, the influence of a diseased heart on the lungs long before the trouble in the circulation itself. She shows on the sphygmographic trace all the characters of a grave and double mitral lesion, which, as I said, can go on without any murmur. Her antecedents give us the right to place the endocarditis at the time she had the bronchitis, which was no doubt the source of the lesion, and the reason the symptoms showed themselves lately is owing to fatigue of the myocardium; and as there was a mitral lesion, it showed first in the lungs by the oppression.

"Having now arrived at a point where they both have functional insufficiency of the muscular structure of the heart, we ought to attempt to restore it; and here is the difference in gravity between the two cases. In one there is a grave mitral lesion, and any amelioration we may obtain will be of short duration; but in the other case it ought to act satisfactorily and the treatment should give good results.

"What shall we do in these cases of heart-disease? The state of the muscular structure must dominate all the therapeutic measures, and one of the most delicate questions in therapeutics is when and how digitalis should be used. It is called a heart-*tonic;* and this name alone indicates that consideration of

the contractility of the myocardium must be the important point, and this principle is so important that I have been in the habit of saying, *to know if you should use digitalis, you don't need auscultation; your hand will be sufficient.* The danger in these maladies consists in the default between the central motor—*i.e.*, the myocardium—and the obstacle to be moved,—the column of blood. As long as this action is perfect, the patients are safe, and they may have any quantity of murmurs; they will not be in any danger until the central motor diminishes. In a word, the state of the muscular structure tells you what medication is needed. I have said that the hand will be sufficient to tell you how it is; but, unless there is great experience, it will not always be sufficient to appreciate its contractility; but, however, direct auscultation with the ear will enable you to catch the slightest differences.

"In one group of cases the insufficiency will be demonstrated at once to you by the œdema, by the cyanosis at the extremities and face, and by the albuminuria. In a second group it will be more difficult; there may be no exterior signs, only a feeling of thoracic fulness, short breathing, desire to keep the head elevated, some palpitations, and that is all. But I will give you some signs to guide you: 1st, force of the heart's beat; 2d, irregularity; 3d, quickness; 4th, quantity of urine in the twenty-four hours. Here under the normal means diminution of arterial tension, and therefore of the cardiac contractions. If there is one-third less, you may be sure of insufficiency, particularly if it persists for several days.

"In both these groups there is the indication for the heart-tonics, and digitalis is at the head of them. What preparation should you use? The infusion is to be preferred, as the tinctures are very uncertain; and take the leaves, not the powder. Indicate in your formula the quantity of leaves according to the case to one hundred grammes of water; state the time of the infusion, which is twenty minutes; and add some thirty grammes of a diuretic syrup to it. No dose can be fixed, as it will vary in different cases. As a general rule, if there is no exterior sign to guide you, then 0.20 of a gramme of leaves gives excellent results. On the other hand, when asystole is established the dose must be raised, or else the patient will be fatigued uselessly, and you will arrive very quickly at his term of intolerance and have to abandon the remedy. Here give 0.50 up to 0.80 of a gramme, but commence at once at your maximum dose; do not raise it from 0.40 on up, or you will run the risk of poisoning the patient. Digitalis should never be given continuously, three days at most at the same dose; indeed, it is a much better plan to give your dose one day, and then lower it the next day, and the next, and so on; after five days, let there be a period of suspension of at least three days. If the case be very serious, use other means during the suspension. In all cases, when giving digitalis, see patients every day. If they vomit, you will recognize intolerance at once: but there are other signs to guide you: the pulse, under digitalis, should be slow and strong, and the first sign of intolerance may be a diminution in the force of the pulse, and if you disregard it and go to the next day, then the slowness will be modified, and the pulse will be feeble and rapid. That is enough; stop the medicine. Consider also the urine: it should augment in volume; if not, it is of no use to continue. Should the patient have nightmare and some hallucinations in the daytime, stop the remedy: it indicates a toxic action. In short, watch the pulse, the urine, the nervous system, and stop on the first sign and try something else; you can come back to digitalis afterwards. Next to it, in my opinion, comes caffeine, which gives the same effects as digitalis. The best form to use is the pure caffeine or its double salts, for the simple salts, such as the citrate, the hydrochlorate, and the valerianate, are unstable and unreliable. Pure caffeine is a white substance, crystalline, and is best given in *cachets* when the patient swallows well, or according to the following formula:

"℞ Caffeinæ (pure), 7 grammes;
Sodii benzoat., 7 grammes;
Aquæ, 250 grammes. M.

"One tablespoonful of this represents 0.50 of a gramme. In slight cases give 0.20 to 0.40 of a gramme in twenty-four hours. In graver cases commence at once with 0.80 to one gramme. One gramme and a half is my maximum dose.

"Is this medicine objectionable in any way? Yes; but not in the same way that digitalis is. Some patients will have cramp in the stomach, and, if you continue, will develop a gastralgia; and this will be followed by insomnia and nervous symptoms. If the intolerance be only gastric, you can overcome this by giving it hypodermically in such injections as the following:

"℞ Sodii benzoat., 2.95 grammes;
Caffeinæ, 2.50 grammes;
Aquæ destill., q. s. to make ten cubic centigrammes (about six grammes). Each Pravaz syringeful of this will contain about 0.25 gramme of caffeine.

"Or we may use this:

"℞ Sodii salicylat., 3.10 grammes;
Caffeinæ, 4.10 grammes;
Aquæ destill., same as above. M.

"This will be 0.40 gramme to the syringeful. I prefer the first of these formulæ, as it is borne better by the skin.

"Now as to the American plant, Convallaria majalis, which Professor Germain Sée has so highly eulogized in heart-diseases. I

do not find that observation confirms his opinion: so you must not hope for too much from its use. At the same time, it may be tried, if the digitalis and the caffeine are not borne well; but don't be oversanguine as to its efficacy. Employ the leaves and flowers in an infusion, in which put a syrup, and give from one to two grammes a day,—that is to say, three or four teaspoonfuls. Dr. G. Sée now uses the active principle, as follows:

"℞ Convallamarine, 0.20 gramme;
Alcohol at 60°, diluted, 100 grammes.

"Dose of the above, two teaspoonfuls per day.

"Milk-treatment must always be added, a quart to a quart and a half per day, which may be varied, after a week, by mixed diet.

"Now, a word in closing. Your remedies, however powerful, won't act under three days, and in some of these cases you must act at once. Then give drastics to clear the circulation, if you have time; if not, in more severe cases bleeding may be called for. In extremely urgent cases give at once an alcoholic potion, to which add, if you can, a proper dose of acetate of ammonia or syrup of ether. Put sinapisms all over the body, even about the heart, while you prepare your quickest remedy, which would be the subcutaneous injection of the caffeine."

Concours for Professeurs Agrégés.—One of the most interesting sights just now in Paris, for medical men, is the *Concours de l'Agrégation* that is held at the Faculty. It will, we think, be of interest if we give some account of how Professors of Medicine are made in France. As a rule, most of the eminent professors here have commenced at the bottom of the ladder and worked up to the top. First they pass the examinations for the degrees of Bachelor of Arts and Sciences at the Sorbonne, and then they come to the Medical School, where, the following year, they pass the first examination for the M.D. After this, for two years they follow the hospitals as *stagiaires*, and dissect during the same period in the afternoons, taking up only anatomy and histology. They then pass the second examination for the *doctorat;* succeeding in which, they try for the place of *aide d'anatomie*, which allows them to give a lecture once a week on anatomy in the pavilions, and during the rest of the time of dissection they are assigned to a certain number of tables, to give instruction to the younger students under the direction of the prosector who has charge of the dissecting pavilion. They hold this office for two years, and at the same time they are externes in the morning hours at some one of the hospitals. The next step of the aspiring professor is the place of interne, which they hold for two more years, passing now the third examination. After the internat they finish the last examination and become doctors of medicine, having now been mostly seven years at study. After this they try for the place of prosector of anatomy, having charge of a pavilion, or else they become *chef de clinique*, having charge of certain wards in the hospital in the absence of the professor. This is as high as they can go before coming to the present trial for the place of *professeur agrégé*, or under-professor.

The *concours* now going on is for the purpose of choosing six of these assistant-professors, to replace those whose time has expired.

The concours takes place every three years, and they certainly call out the best obtainable talent in the country. The chosen ones serve for seven years, and deliver a certain number of lectures during that time, and at the call of the dean (Professor Béclard) they must serve at examinations and be ready to replace any professor who may be ill or absent. They wear a dark robe at examination, with the red hat of a professor. The pay is only six hundred dollars a year, with an allowance for examinations.

There are about thirty of them at the Paris Faculty, and the regular professors are elected from their ranks by a vote of the Faculty. Professor Mathias Duval, who replaces Robin, was elected by acclamation, all voting for him; but sometimes there is a long fight over it. A full professor gets two thousand four hundred dollars a year, besides allowances for laboratory and examinations. But to return to the present concours. Some twenty-nine candidates presented themselves for the six places vacant, and, to show what proofs they are being put to for the purpose of testing their knowledge and fitness, we give a hasty sketch of the proceedings.

A jury of nine professors sit in state in the grand amphitheatre at the Faculty, while the public gather on the benches. The candidates enter; then each professor drops a written question into a hat, which, after being well shaken, is passed to an elected one of the aspirants, who draws out a question and announces it. The candidates are then taken to a large empty room, where they are given pen, ink, and paper, and left to write out their ideas on the subject. When they have finished (which must be under three hours), the manuscript is sealed up, and they draw lots for precedence in reading. They then, in turn, read before the public and jury what they have written. The subject drawn this time was "Hepatic Cells." After this test, the professors each put three questions into the hat, and two of the candidates draw out one of the subjects, and they are locked up with a guard over them for three hours, when they have to come before the public and jury as before and speak three-quarters of an hour on the subject drawn. This is continued until by twos they have all spoken, each two on different subjects, as a question once drawn is

not put in again. To give an idea, the following were some of the questions treated: "Diagnosis of Progressive Locomotor Ataxia," "Acute Articular Gout," "Cardiac Kidney," "Parkinson's Malady," "Thoracic Complications in Typhoid Fever," "Cancer of the Uterus," etc.

This second trial having terminated, the jury then vote to see how many of the candidates are fit to continue on to the final trials, and of the twenty-nine now up twenty were allowed to go on. The final trials are something the same, except that the candidates are not locked up. The third trial is on questions drawn in the same way, but on much more difficult subjects, and here they are allowed twenty-four hours to prepare before talking one hour on the subject. The concours ends by the candidates writing a thesis on a given subject, and the jury proceeds to elect those who they think are the most fit for the places.

The ability displayed at the impromptu trials, where the candidates can have no help from any source, is astonishing. They cannot know on what subject they may be called upon to speak, and it shows a wonderful display of medical knowledge and the advantage of a thoroughly well grounded medical education. It is by this system that France has endowed science with so many remarkable men from Bichat to Claude Bernard, and up to the distinguished men of the present generation.

Intra-Parenchymatous Injections in Pulmonary Phthisis.—Dr. Gouguenheim spoke lately at the Société Médicale des Hôpitaux on the treatment of phthisis by intra-parenchymatous injections of a solution of corrosive sublimate. He said that several American authors had proposed such injections, but that most of them would not use the sublimate, fearing danger. Late experiments that he had made, however, prove that this exclusion is not justified. The needle used must be longer than the one used with the hypodermic syringe, and it must be inserted into the first or second intercostal space in front. On the right side also it can be placed or introduced in the third interspace. From the posterior part of the trunk it is too difficult. Care must be taken to avoid the large venous trunks, and to press the piston down slowly, also to cover the needle with a coating of carbolized oil. With these precautions, injections of this sort may be practised without the slightest danger or fear of local accidents.

The solution made use of, where the case was that of tuberculous infiltration, was a weak one of 1 to 2000. A stronger solution, of 1 to 1000 or 1 to 500, was reserved for cases of softening or in excavations or caverns. Not more than one syringeful was used at a time, —say about one gramme of liquid, which contained from one-half to two milligrammes of sublimate.

The operation was not at all painful. When cough followed, the treatment was at once suspended. The patient was instructed to be silent during and for some time after the operation. Hæmoptysis was exceptional and transitory in character, but if it came on the treatment was stopped at once. The advantages derived were: a considerable improvement in all the signs given on auscultation, a diminution in the expectoration, and in thirty-three cases treated twenty-one were much improved and the rest slightly so. All the usual methods of treatment for phthisis were used also; and it will be of interest if we add that the medicinal treatment recommended here is that adopted by Professor Peter, and given by him the other day in his present course of lectures on tuberculosis. It is, in brief, as follows: small doses of arsenic for three days; the same of sulphate of quinine for the following three days; and during these six days white cod-liver oil is to be given; then rest on the seventh day, or no treatment once a week, with the usual hygienic treatment for the skin of lotions of cologne and water or plain cold water and careful rubbing down daily.

Professor Panas has again something to say about antisepsis in eye-surgery, principally in the treatment of cataract. The principles that guide him are, first, to make use of an antiseptic that is *sure* and *not irritating* in its action; then the liquid used must be pushed into all the corners of the field operated upon; next, a very complete cleansing of all blood, iris-pigment, and air-bubbles must be carefully made, while the iris itself should be reduced and completely contracted; afterwards the dressing applied should be strictly antiseptic, and the eye kept in repose a sufficiently long time.

Of all the antiseptics which he has used during the last two years, Dr. Panas has now definitely adopted a solution of the biniodide of mercury, in 20 to 1000 solution. Even in 40 to 1000 this salt possesses a very strong anti-fermentative power, so that at double the strength nothing should resist it: at least such is the experience in the eye-clinic of Professor Panas at the Hôtel-Dieu. The following is the formula adopted there:

℞ Hydrarg. iodidi rubri, 5 centigrammes;
Alcohol at 90°, 20 grammes;
Aquæ destill., 1 litre. M.

The salt is first dissolved in the alcohol, and is then thrown quickly into the water. This solution does not produce the slightest irritation of the conjunctiva, and is well tolerated by the cornea and the iris.

As to the other antiseptics used: boric acid is not irritating, but its antiseptic power is doubtful. The bichloride of mercury is more irritating than the biniodide, and its antiseptic power is not half so great. The same can be said for the "Sattler" solution. The instrument

used to wash out the eye is similar to the little drop-counter, with a rubber tube attached.

THOMAS LINN, M.D.

PARIS, FRANCE, January 18, 1886.

WASHINGTON.

AN active effort will be made during the present session of Congress to secure legislation to give the medical staff of the navy a status somewhat similar to that held by the army medical corps. In the army, the medical officer enters the service with the rank of first lieutenant, having all the privileges and emoluments of an officer of the same rank in the line. In the navy, on the other hand, the newly-appointed assistant-surgeon is placed on a level with the young fellows who have just graduated from the Naval Academy, and is denied by naval etiquette and regulations that position among the commissioned officers of the line to which his education, age, and responsibilities entitle him. That this unjust discrimination operates to the disadvantage of the naval medical service is made manifest by the fact that while there are now about fifteen vacancies in the naval medical corps, and no properly-qualified applicants for the position, there are no vacancies in the army and any number of candidates. It is hoped by the advocates of the measure which has been presented in Congress that, in the impending reorganization of the navy, the just claims of the medical corps will not be overlooked.

It is believed that the bill providing for the appointment of a commission to investigate the trustworthiness of yellow-fever inoculation as a preventive of that disease will pass both Houses of Congress without difficulty. The House Committee on Commerce, to which the bill was referred, has reported unanimously in its favor. The Senate Committee on Epidemic Diseases, of which Senator Isham G. Harris, of Tennessee, is chairman, is also committed to the support of the bill.

The bill, as reported by the House Committee, provides for the appointment of a commission of three experts, two of whom shall be officers in the government service and one from civil life. One member of the commission shall be especially skilled in methods of bacteriological research, while the others are required to be experts in the diagnosis and treatment of yellow fever. Twenty-five thousand dollars are appropriated to carry out the objects of the bill. There are no two opinions as to who the first member of the commission should be, Dr. George M. Sternberg, of the army, being named as the most appropriate choice for that place. The other government officer will probably be taken from the marine hospital service or the navy, while Dr. Holt himself or some other member of the profession in New Orleans will probably be chosen as the member from civil life.

Unexpected opposition to the commission has developed in the very place where it would be least expected,—namely, in New Orleans. The *New Orleans Medical and Surgical Journal* has editorially pronounced against the passage of the bill and the appointment of the commission, on the grounds that the truth of the claims of Freire and Carmona is not established, and that the amount of money asked for is too large to waste in such an investigation. The source of the opposition of the New Orleans journal and of some active lobbying against the bill in Washington has been traced by Dr. Holt to the National Board of Health, which thinks the investigation should be conducted under its auspices and direction. As above stated, however, the impression among those best informed is to the effect that the bill will pass, especially as President Cleveland and Secretaries Bayard, Manning, and Lamar had endorsed the propriety of such an investigation as is provided for in the bill.

The Second Controller of the Treasury recently stopped the accounts of Dr. Billings for expenses incurred during his attendance upon the International Medical Congresses at London, the Hague, and Copenhagen. The technical point made by the Controller was that the Secretary of War had no authority to order an officer to perform duty in a foreign country, and that hence the government could not be held responsible for any expense incurred while obeying such an order. The injustice of such a decision becomes manifest when it is considered that a refusal to obey any order of a lawful superior would render the officer liable to court-martial, while its execution leaves the head of the department entirely irresponsible and fixes the liability upon the officer obeying the order. Dr. Billings has appealed for a reconsideration of the decision, which it is to be hoped will be granted. It would not only be a flagrant injustice to Dr. Billings, but an insult to the dignity and honor of the profession, to mulct the former in the sum stopped against him by the Controller's decision.

Congress will probably authorize the republication of the Medical and Surgical History of the War, the edition of which is exhausted; and it is hoped also that another edition of the Index-Catalogue will be reprinted. The six volumes already issued are entirely unobtainable except in some old-book stores, where they are held at from four to six dollars per volume. This work could be reprinted at a cost of about two dollars a volume; and Congress should promptly make the necessary appropriation for this purpose. About one-half of the seventh volume of the catalogue is in type.

The foundations of the new medical mu-

seum building are laid to the height of the ground-floor, and work will be resumed as soon as the weather permits. The building will probably be under roof before next winter.

At the Army Medical Museum, frozen sections of the body are now being made with success. This method of making sections of the cadaver should be introduced wherever anatomy is taught, as it renders instruction in this important and difficult branch much more easy and accurate than under the present system. G. H. R.

February 13, 1886.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A STATED meeting was held at the Hall of the College of Physicians, January 20, 1886, Dr. R. J. Levis, President of the Society, in the chair.

A CASE OF APHASIA, WITH HEMIPLEGIA, HEMIANÆSTHESIA, HEMIANOPSIA, AMBLYOPIA, AND LOSS OF TASTE, HEARING, AND SMELL, ON THE AFFECTED SIDE.

Dr. H. C. Wood: "I present to-night a very unusual case. I have been unable to learn much of the previous history. I have found out that he was a soldier in the regular army and was discharged on account of physical disability. At present he is a patient in the Philadelphia Hospital. From the War Department I have learned that he has been sick for a long time with troubles which at various times have been diagnosticated as typho-malarial fever, paralysis, hemiplegia, aphasia, etc. Although the man possesses some intelligence, we have been unable to obtain any reliable information from him, on account of the aphasia and more or less agraphia. The loss of the power of speech is undoubtedly true aphasia, and not aphemia. There is no distinct paralysis of the face, and comparatively little paralysis of the tongue. It is apparent that there has been paralysis of the face at one time. His statements would indicate that this trouble came on suddenly; but this is doubtful. The lines on the right side of the face are less pronounced than those on the left. There is distinct loss of power in the right arm, and slight loss of power in the right leg. The man's statements indicate that at one time he was very profoundly hemiplegic. There is nothing remarkable in the coexistence of aphasia and right-sided hemiplegia.

"I find, however, on sticking a pin into the skin, that there is distinct anæsthesia of the right side of the body. It also appears that there is loss of the power of tasting on both sides of the tongue. There is also distinct loss of smell. The hearing on the right side is also very defective.

"On examining the eyes, we find, in the first place, amblyopia in both eyes, but more marked in the eye of the affected side. There is also nasal hemianopsia in both eyes. The cause of the amblyopia is probably not the lesion in the brain, but it results from the atrophy of the optic nerves, and, undoubtedly, earlier in the case there was choked disk. The atrophy of the optic nerve is most marked on the right side.

"The question is, Where is the lesion, or lesions, if there are more than one? There are various lesions which will affect vision, and there are various lesions which will affect motion, but there is only one known lesion that will produce aphasia, or at least the region in which lesion will produce aphasia is a very narrow one. We know that lesion of Broca's convolution, or the island of Reil, may produce aphasia on the left side. Immediately beneath Broca's convolution, in the outer part of the external capsule, there is a little mass known as the claustrum. A lesion sufficiently large at this point may produce paralysis of motion and also aphasia by tearing up the island of Reil from the gray matter beneath. In the two or three autopsies I have made when there has been aphasia with pronounced hemiplegia, the external capsule has been involved in the neighborhood of the claustrum. If we had only aphasia and hemiplegia, we might suppose that there was such a lesion; but we also have hemianæsthesia and disorder of all the special senses. The course of the sensory fibres through the brain is very imperfectly understood. We know, however, that they pass through two or three places. From the optic thalamus the fibres radiate outward, passing to the posterior part of the brain. We know from pathological studies that at a point between the corpus striatum and the optic thalamus the sensory fibres come together, so that a lesion involving the posterior part of the internal capsule would cause hemianæsthesia and disorder of the special senses. A lesion in the posterior portion of the optic thalamus will do this.

"A possible explanation of this case is that the man has two lesions in his brain,—one in the neighborhood of the claustrum, and a second in the position which I have just indicated, in the internal capsule, perhaps involving the optic thalamus itself.

"Another possible explanation is that the whole lesion is cortical. A large clot forming on the surface of the brain might so press upon the ascending frontal convolution as to produce general paralysis of the opposite side, and this clot, extending into the fissure of Sylvius, might press on the island of Reil. Again, I believe that it is fairly proved that this posterior portion of the brain, the occipital lobes, is connected with sensation, and

pressure in this situation might produce hemianæsthesia and paralysis of the special senses. It seems to me, however, that a clot affecting the superficial surface of the brain in such a way as to produce the symptoms here present would have to be of such a size as to be followed by more marked degeneration than is here evident.

"Dr. Dreschfield has reported a case with symptoms similar to those which this man presents, and at the autopsy the lesion was found in the position which I suppose it to occupy in this case,—viz., in the neighborhood of the claustrum and external capsule, and in the internal capsule near the optic thalamus, posteriorly."

Dr. Dercum: "It seems to me that the supposition of two lesions is unnecessary. It is well known that a hemorrhage in the internal capsule, if large enough, may destroy a portion of the corpus striatum and effect pressure on the claustrum. It is also known that in hemiplegia we have sensory symptoms in direct proportion to the extent to which the clot extends backward."

Dr. Charles K. Mills: "It seems to me that one lesion is sufficient to explain the symptoms in this case. I have seen hemiplegia with aphasia where the lesion was in the external capsule; but there has always been more than this. The lesion, if not cortical, is usually one involving the width of the internal capsule, and sometimes the lenticular nucleus. Hemiplegia is certainly a result of this lesion, and it is still a question whether aphasia may not be.

"Dr. Wood is mistaken in saying there is only one such case on record. I have reported a case which was under my charge in the Philadelphia Hospital in 1883, and which was published in a lecture in the *Medical and Surgical Reporter* (February 23 and March 1, 1884), a case almost the counterpart of that described to-night. I did not, however, determine whether or not hemianopsia existed. In that lecture I also quoted a case by Müller in which the same symptoms existed, and in which the results of an autopsy were given. The lesion in that case was as follows: a circumscribed focus of softening, the size of a pea, was found at the apex of the third division of the external part of the lenticular nucleus and adjacent white matter. The report does not state whether the external or the internal capsule was involved.

"Pierrot has reported thirteen cases of hemianæsthesia with most if not all of these symptoms, in which the lenticular body and the adjacent part of the internal capsule was affected. This was in 1883; and more cases have been reported since then.

"I should think that in this case the lesion would probably be in some special position of the posterior part of the internal capsule, probably involving also the lenticular nucleus.

"One of the most interesting practical points in connection with a case of this sort, and one on which Dr. Wood has not touched, is that of the differential diagnosis from hysterical hemianæsthesia. Omit the aphasia: suppose the lesion to be on the other side of the brain, you would then have almost everything present in the hysterical case but the aphasia. In the hysterical cases you have hemiparesis, hemianæsthesia, including under this term changes in the special senses. In organic cases we have a history of some form of apoplectiform attack, with temperature-changes, peculiarities of respiration, and various other symptoms. The preceding history is one of the elements in the diagnosis. The case of Müller to which I have referred presented exactly the same symptoms as have been described, and in that case there was a single lesion at the apex of the lenticular body. The case appeared to have been carefully studied."

Dr. H. C. Wood: "In regard to what Dr. Mills has said, I may reply that if you discuss this case with the aphasia left out, you do not discuss this case. You discuss some other case. You might as well ask me to discuss night with the darkness left out.

"With reference to the cases to which he has alluded, so far as my knowledge goes, the aphasia was left out. Every day we see aphasia associated with hemiplegia, and not infrequently hemianæsthesia associated with hemiplegia. The peculiarity is that in this case we have all these associated.

"I think it possible that Dr. Dercum may be right in his explanation; but there is no way to prove it. It is a mere question of probabilities; and it seems to me improbable that a hemorrhage of sufficient size to produce these symptoms could occur without permanently destroying the whole brain-function and being followed by degeneration of the whole hemisphere. This is the reason that it seems more probable to me that there are two lesions.

"The difficulty of diagnosis is augmented by the absence of history. If the case had been watched in its development, and we had known whether the aphasia developed suddenly or gradually, and the other symptoms came on *pari passu*, it would be possible to be more positive. If the man were stricken down with a tremendous apoplexy, which threatened life and from which he escaped by a miracle, the symptoms would probably be due to a large hemorrhage. If, however, as the history would indicate, the symptoms developed gradually, the probabilities are in favor of two lesions.

"If there are two lesions, the case is probably syphilitic. Numerous foci of disease in the brain are very prone to be the result of syphilis. The occurrence of choked disk, with atrophy of the optic nerves, would point to a progressive lesion.

"So far as hysteria is concerned, I suppose that the Society has already heard enough from me to-night, and, as others are waiting to address the Society, I shall not enter upon the discussion of the diagnosis between organic and hysterical anæsthesia, as it has no immediate bearing upon this case, in which the presence of lesions is very evident."

Dr. Frank Woodbury: "Would not a single lesion in the posterior cerebral lobe, extending forward, explain the hemianopsia, hemianæsthesia, and hemiplegia? I would also ask the lecturer if, knowing as we do that aphasia may occur without any gross lesion and with only transitory symptoms, he would consider it necessary to assume a separate lesion to account for the aphasia."

Dr. H. C. Wood: "A lesion in the posterior lobe might produce the symptoms mentioned. I doubt whether there ever was a case in which there was complete permanent aphasia without organic changes. I once reported what was apparently such a case; but I found, on microscopical examination, degeneration of the centres."

PHILADELPHIA NEUROLOGICAL SOCIETY.

STATED MEETING, JANUARY 26, 1886.

(Continued from page 396.)

DR. H. C. WOOD reported

TWO CASES OF SYPHILITIC DISEASE, THE LESION IN ONE INVOLVING THE ASCENDING FRONTAL CONVOLUTION, IN THE OTHER THE CERVICAL SPINAL CORD.

The first of these cases is of special interest, because, so far as the motor symptoms are concerned, the situation of the lesion closely agrees with the modern doctrine of cerebral localization, whilst no lesion was found to account for the loss of sensibility. The only explanation that could be given of this is that disease had existed in the membrane over the angular gyrus and had been removed under the influence of the mercury, there being no record as to the condition of sensation just previous to death. This explanation seems, however, rather lame, because more distinct traces of such lesion would naturally be expected. The cases are also of interest as illustrating a danger which always overhangs a person suffering from syphilitic epilepsy,—namely, possible arrest of respiration during the convulsion, and consequent death.

Case I.—R. B., male, aged 50, entered the Nervous Ward of the Philadelphia Hospital January 2, 1885. The following extract is taken from the case-books of the institution: "R. B. says that his health has always been good, and, whilst acknowledging that he had chancres twenty-five years ago, denies all other forms of venereal disease. Eight years ago he fell down-stairs and struck his forehead just above his left eyebrow: he was picked up unconscious, and remained in that condition for four hours. One week after his fall he returned to work, but was troubled with a feeling of lightness in his head and vertigo. About two weeks after this he suddenly felt a peculiar pricking sensation in his right foot, which extended rapidly up the leg to the thigh, and finally to the right arm, and thence to the head, and was immediately followed by unconsciousness. He has never bitten his tongue in this or in any subsequent attack. The convulsion was followed by a period of stupor or sleep. About two weeks after, there was a second epileptic attack, without any aura or other warning. His arm, which had continued in a numb condition ever since his fall, for a time grew steadily worse; for one year its condition then remained unchanged. He still had epileptic attacks at intervals varying from a few weeks to a few months. Eighteen months ago he had an apoplectic attack, in which the unconsciousness lasted for several hours. There was no ensuing paralysis, nor did his health seem to be the worse for the sickness. He states that he now has, at about monthly intervals, attacks of epilepsy. These attacks are preceded by a peculiar twisting of the fingers of the affected hand, and followed by stupor or somnolence, lasting for about twelve hours.

"*Present Condition.*—There is partial motor paralysis of the right hand and arm. With the left hand he moves the hand of the dynamometer to ninety-five; with the right only to thirty. The æsthesiometer-points, separated to their widest, are felt on the right hand and arm only as one; on the left arm the points are separated on the ulnar and radial side at two and a half centimetres apart; on the palmar surface at four centimetres. He has not as good use of his right leg as formerly, although there is no complete paralysis of any of its muscles. Patellar tendon reflexes normal. Ordered potassium iodide in increasing doses.

"*Treatment.*—January 6, 1885. According to statement of nurse, in his fits the patient works altogether with right side. Left pupil slightly smaller than right. Perceptible weakness in right face. Dynamometer: right hand, forty-six; left hand, eighty-seven. In neither thigh is there any difference in sensitiveness. He complains a good deal of frontal headache. Edges of optic disks sharply cut, and optic disk itself abnormally white, believed to be atrophic. Ordered to be ptyalized.

"The patient was ptyalized, and afterwards was given the iodide very freely; but, notwithstanding there was distinct improvement in regard to headache and general condition, the fits continued, although at longer intervals, and on May 9 there was prolonged unconsciousness after a fit, ending in death.

"*Autopsy*.—Contents of thorax normal, except as to congestion; liver is large and congested, indurated, capsule thickened. In the tissue between the right and left lobes, anteriorly and near the lower edge, is a distinct gummous tumor of the size of a hickory-nut. The new growth has developed from the capsule and grown inward. Upon the upper border of the same fissure and posteriorly is a scar, evidently a healed gumma. Kidneys congested, but otherwise normal. Rest of organs normal.

"Brain: When the skull-cap was removed, some ounces of black blood ran out. Membranes much congested everywhere. Dura mater normal, except in being abnormally adherent to the edges of the great fissure.

"Left hemisphere: Arachnoid and pia mater abnormally thick, especially superiorly, and somewhat opaque. Vessels somewhat congested. On external inspection of the bared convolutions, nothing abnormal is observed, except about the middle of the ascending frontal convolution, where, at a spot one-half inch in diameter, the membranes were fused with the brain-surface and could not be separated. The tumor is one-third of an inch in thickness, and, in tearing it out, a definite cavity was left. No other lesion discoverable in any part of that hemisphere. Remainder of brain normal in general structure.

"Cause of death, œdema of the brain from cerebral syphilis."

Case II.—Cadamomi, aged about 22, entered the wards of the Philadelphia Hospital June 1, 1885. As he was an Italian of very low order of intelligence, no detailed history of his case could be obtained. He stated, however, that he had been well and strong until three months before, when he had been hurt in the upper part of the back, and had not been able to work since. One month before entrance he had rapidly lost power in both arms.

His condition at the time of entrance to the hospital was as follows. He is unable to stand, and entirely confined to bed, but can make feeble and slow movements of the thighs, legs, and feet, all muscles seeming to be about equally implicated. The whole of the left arm is paralyzed except the thumb, which can be moved slightly. In the right arm, the deltoid and the flexors of the fingers are much wasted. There is no paralysis of the face; patient cannot turn in bed, but has not lost control of the bladder and of the rectum; sensation is not much affected; pain is complained of in the back and side of the neck, and in the limbs, especially in the arms; marked pain in the sternal region on coughing; pressure of the lower cervical vertebræ causes severe pain, and forcible jarring of the head also produces pain in the lower cervical spine; cervical vertebræ not distinctly prominent; patellar reflex somewhat exaggerated; temperature normal; bowels persistently very costive.

The patient was put upon a water-bed, and iodide of potassium given in rapidly-increasing doses, until a hundred and eighty grains a day were taken; but the symptoms gradually increased, paralysis became more marked in the lower extremities and complete in the arms, power over the bladder and rectum was lost, and the patient died June 18, seventeen days after his entrance into the hospital.

The autopsy was confined to the vertebral tract. "In the lower cervical region, extending into the upper dorsal, is a thickened mass, several inches long, not at all separable from the membranes of the cord. The outer portion of this is formed of a uniform structureless basis, filled with numerous long, narrow, curved cells, evidently derived from connective tissue. Within, this mass is chiefly composed of innumerable small, round, closely-packed cells, sometimes arranged in irregular, diffused masses, but in many cases collected into globular masses, which are only in rare instances distinctly separated from surrounding tissue. A few of these masses were yellow, the cells evidently undergoing fatty degeneration, and not taking staining at all.

"Cord underneath the tumor chiefly composed of a structureless, minutely granular, neuroglia-matter, with numerous roundish neuroglia-cells. No nerve-tubule discoverable in section. Gray matter affected nearly as much as white; ganglionic cells still present, although most of them much altered."

The following report was made by the committee appointed to inquire into the

METHODS OF SLAUGHTERING CATTLE,

and the question as to whether cattle suffer from witnessing the slaughtering of companions.

"Your Committee have the honor to report that they held a meeting at the Philadelphia Abattoir and witnessed the slaughter of a number of cattle. As the arrangement of the building and the methods employed have been fully described to the Society in the paper of Dr. Hinsdale, it does not seem necessary for your Committee again to go over this ground; and the Committee confine their report to answering the questions proposed by the Society for the Prevention of Cruelty to Animals. We find, in the first place, owing to the unskilfulness in the use of the hammer by the butchers, that perhaps in the majority, certainly in a very large proportion, of the cases, the animal is not rendered permanently unconscious by the first blow. In a number of instances the creature, when struck, either failed to fall or simply went down upon his knees and rose again, and had to be driven around the pen, and sometimes struck again and again before falling. Further, it is the habit of the place

to strike down several bullocks one after the other, so that one or two of the animals must lie on the ground some time before the throat is cut. In very many instances the creature seems partially to recover its senses during this time, and in some cases undoubtedly becomes perfectly conscious, and even gets up upon its feet. There can be no doubt, therefore, that a large amount of unnecessary suffering is produced in the killing as practised at the Philadelphia Abattoir.

"A properly-directed and sufficiently powerful blow undoubtedly will immediately put an end to consciousness. It is not the general idea of the method of killing which is at fault at our abattoir, so much as the unskilful way in which it is performed. If the animal were driven into a narrow pen, so as to insure quiet and a perfect opportunity for a blow, and if, at the same time, the hammer were heavier than the one now used, and were employed only by a skilful person, nothing more could be desired. In our opinion, there should be one man whose sole duty it is to strike down the animals, since only by repetition can perfect skill be acquired.

"We believe that there is a certain amount of psychical suffering induced by the present method. The animals evidently have a sense of danger, although they apparently do not recognize the point from which the danger is coming. The need for the appointment of some one who shall inspect the carcasses of the slaughtered animals was very well shown by the fact that in one of the beasts killed during our stay the liver was full of hardened nodules of a whitish color, and many of the lymphatic glands were evidently affected with the same disease. So far as gross appearances could determine, the animal, when killed, was in the advanced stages of tubercular disease of the liver. The nodules have been referred for examination to well-known microscopists, whose report we hope to hand in accompanying our own."

After the reading of the report of the Committee, on motion it was accepted, and the Committee were requested to present the matter, on behalf of the Neurological Society, to the College of Physicians of Philadelphia.

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held February 18, 1886, the President, A. JACOBI, M.D., in the chair.

RHEUMATISM IN EARLY LIFE.

Dr. H. D. CHAPIN read a paper in which he gave the chief features of a series of seventy-six cases of rheumatism in early life which had come under his own observation. He also referred to the views of different authors as to the frequency of this affection in early life. While most authorities admitted that it might occur, the majority appeared not prepared to consider it a common affection in infancy. Of Dr. Chapin's list, one patient was aged only six months, another eleven months, and a third twenty months; there was one aged three years, and two aged four years; the oldest was seventeen years of age.

Heredity was recognized as a causative factor in a large number of cases in which definite information could be obtained on this point. Most of the cases of rheumatism in early life occurred in girls. He had no explanation for this fact. The lower extremities were most frequently affected, particularly the knee. There was more likely to be soreness on exercise rather than actual pain. Swelling and redness of the joints were absent in most cases. There was a repetition of the attack in a large number. A very general feature was marked hydræmia; and this was an important factor in diagnosis and treatment.

Of the seventy-six cases, twenty-six had rheumatic valvular disease, in most instances there being a mitral regurgitant murmur. This was the proportion found by Senator. He thought the heart was more often slightly affected by endocarditis in mild attacks of rheumatism than was generally supposed, but there might remain no permanent lesion. He thought acute endocarditis usually gave rise to less constitutional disturbance in children than in adults, and it was liable to be overlooked. He once presented at the Pathological Society a heart in which all of its structures were so affected as to be nearly destroyed from an attack of rheumatism which was so mild as to have passed for "growing-pains."

Regarding the relation of chorea and rheumatism, he had once published a paper on this subject, and his belief had been confirmed by more recent observations. In thirty-five cases of both rheumatism and chorea the majority of the cases first showed rheumatism; a few first manifested chorea. He had four cases of chorea with a cardiac lesion in which there had been no rheumatic attack.

Tonsillitis was present just before, at the time of, or just after the attack of rheumatism in nineteen cases. It was not proved that this was more than a casual connection. Rheumatism was sometimes accompanied by various other affections. He had been unable to recognize any difference between the rheumatism accompanying scarlet fever and ordinary attacks.

The diagnosis must be made from a collection of symptoms. We should exclude the pains of over-exercise and those of injury.

Regarding the lactic-acid theory of the causation, Dr. Chapin was disposed to regard it as the correct one, and pointed to the fact that many of these patients had poor digestion and acid fermentation of food, and in treatment it was important to regulate the

diet and general hygiene. He thought children were apt to receive too much sugar and starchy food. As soon as a child complained of pain, especially if there was a family history of rheumatism, attention should immediately be given. It should be placed in a warm room, and salicylate of sodium should be early administered, thus preventing the occurrence of heart-complications. If these should occur, it was of the greatest importance that the child should be restrained and exercise secured. There should be subsequent tonic treatment, for most of this class of patients were ill nourished. They should have a prolonged course of iron and cod-liver oil, and occasionally other tonics.

DISCUSSION.

Dr. JOHN C. PETERS thought the largest number of cases of acute rheumatism in children were unattended by any visible joint-complication, the child simply complaining of pain in the muscles and soreness on being lifted. If the heart became affected there would often be evidence of it on examination long before the child would call attention to distress in that region. There was also evidence of valvular disease in a large number of cases of chorea, an affection which was often seen in rheumatic children. Dr. Peters had been accustomed to recognize many inflammations of mucous membranes as rheumatic manifestations. He thought the acid theory of rheumatism the true one, but as to what was the nature of the acid we were not so certain. He had sometimes thought that formic acid had as much to do in the causation of chronic rheumatism as had lactic acid. In the treatment he used salicylate of potassium in preference to salicylate of sodium, and he also made use of potassa baths. To rub the child with fine chalk certainly made it feel comfortable. For the anæmic state he gave tartrate of iron and potash. He believed a large number of cases of nephritis were essentially rheumatic affections.

Dr. J. LEWIS SMITH continued the discussion by a brief paper, in which he gave the points of chief interest connected with seventy-three cases of rheumatism in early life which he had seen during the past fifteen years. As to the *materies morbi*, whether it was lactic acid or something else, he thought observation proved that an attack of rheumatism was most likely to occur after exposure to cold or change of weather, scarlet fever, and in those whose family gave a history of rheumatism. One attack seemed to predispose to another.

Rheumatism occurred rarely before the second year of age, but there was no doubt that it did sometimes occur as early as the sixth month. In most instances it was a mild disease, the child not being confined to bed. It was less painful than in the adult, and was seldom accompanied by so much swelling and redness. In many cases swelling and redness were not appreciable. Many mothers mistook it for growing-pains, and looked upon it as a favorable indication. Occasionally, instead of commencing in the joints of the lower extremities and travelling upward, it commenced in the upper extremities and travelled downward. This was especially true in scarlatinal rheumatism.

Rheumatism in children was a dangerous disease, on account of the liability to affection of the heart. In many cases the endocarditis occurred as early as the second or third day, and in some instances it was present before the child complained of the disease in the joint. The mitral valve was most frequently affected. The action of the heart was usually sthenic. The fact that the myocardium was usually not attacked and the action of the heart was strong, was conservative in more ways than one. Pericarditis was much more rare.

As to the connection of chorea and rheumatism, in thirty of a series of sixty cases of chorea there was a history of rheumatism in the patient or immediate relatives. Dr. Smith emphasized the importance of early diagnosis and treatment in order to combat heart-complication. He believed that the treatment with salicylate of sodium was often begun too late, and that the drug was administered in too small doses. It acted less as a specific if the disease had continued several days than if it were given during the first, second, or third day. He would administer ten- or even fifteen-grain doses of salicylate of sodium to a child four or five years old.

As to lactic acid in the system from imperfect digestion being the cause of the affection, he doubted it, because rheumatism seldom occurred in young infants, whereas these were most troubled from acid fermentation of food.

Dr. MALCOLM MCLEAN thought there was nearly always an hereditary history of rheumatism, and that most cases of rheumatism in early life appeared in girls. Perhaps clothing and muscular activity would account for the less frequent occurrence of the disease in boys. He emphasized the importance of "growing-pains," which he believed to be invariably rheumatic. He usually found pain in the hamstring muscle and calf of the leg. He had noticed accelerated heart-action in cases in which no murmur could be appreciated.

Dr. L. E. HOLT thought the diseases of adults commonly had their analogues in children, and rheumatism, as had been shown by this discussion, was not an exception. He had not seen more than half a dozen cases of rheumatism in children in which there was swelling, redness, and pain, and the marked symptoms of the disease as it appeared in adults. But if the symptoms described by Dr. Chapin were to be considered rheumatic, then the disease was common in early life.

Dr. KETCH had seen quite frequently cases of hip-joint disease, and even of Pott's disease of the spine, in which he had succeeded in tracing a distinct history of rheumatism in the parents. He thought the question of the relation of rheumatism and chronic joint-disease had not received sufficient attention from specialists in orthopædy.

The PRESIDENT said he had been expected to participate in the discussion of this subject, but the lateness of the hour would prevent. He, however, made a few remarks, and referred to a monograph relating to this subject published by him about nine years ago, and which Dr. Chapin had mentioned. As to "growing-pains," he thought they were frequently rheumatic. There were some cases, however, in which the pains complained of were properly growing-pains, as they occurred in cases of rapid development of the epiphyses from physiological hyperæmia, and often in children just recovering from scarlet fever or other acute disease. He did not have in mind those cases in which there was a rachitical diathesis. There were also some cases of pains about the joints rather than in them which were due to a neurosis, and not to rheumatism. As to cardiac murmur disappearing in after-years. he had witnessed a number of cases of that kind. Rheumatic murmurs rather than endocardial murmurs might also disappear within a few hours or a few days after their recognition.

Dr. SELL referred to a case in which a cardiac murmur which had been present in a young lady disappeared later in life.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

STATED MEETING, FEBRUARY 22, 1886.

The President, DANIEL LEWIS, M.D., in the chair.

THE PRESENT AND FUTURE WATER-SUPPLY OF NEW YORK: ITS SIGNIFICANCE AND DANGERS.

DR. JOHN C. PETERS read a paper on this subject, employing diagrams to illustrate the chief points. The paper was based on the investigations of the Committee on Hygiene. The Croton water-shed covered an area of three hundred and thirty-nine square miles; the Croton River, from which the water-supply of New York was obtained, had three heads, which began in lakes, twelve or fourteen in number; some of these lakes had been dammed, and held a reserve water-supply, but not a sufficient amount. One plan was to dam the other lakes; but Dr. Peters said this was impracticable with some, and the expense would be great. The present Croton River dam was old, and the aqueduct was strained in carrying ninety or a hundred million gallons of water a day. The new aqueduct now building would be capable of carrying three hundred millions a day. The Croton River, for a distance of some miles from its outlet into the Hudson, passed through a deep gorge more than a quarter of a mile in width. It was proposed to build a dam across this gorge at Quaker Bridge, the dam to be one thousand two hundred and fifty feet long, two hundred and seventy-seven feet high, and one hundred and twenty-six feet thick at the base. The sides and bottom were of natural rock.

Dr. Peters said the best engineers admitted that it was possible to construct such a dam and make it secure, but the greatest opposition was from those who claimed that the water would become stagnant, that the dam would cost twelve or fifteen millions, and that it would take many years to complete it. Dr. Peters thought it could be constructed for from three to five million dollars, and that it could be completed in three or four years, although there were good engineers who claimed it would require eight years. As to the water becoming stagnant and impure, he thought there was little danger of it; besides, sluiceways would be provided for letting impure water out if it became necessary to do so. At present there was more than the amount of water from the Croton River used by the city going to waste, and some days the waste was eight hundred million gallons, and at other times a sufficient waste took place in a day to supply the city with water for eighty days. It was of the greatest importance to dam this water, so as to be prepared for a drouth.

It was also proposed to build a dam called the Sodom dam, which could be completed in a much shorter time and at much less expense; and the committee recommended that this be built at present, and that the Quaker Bridge dam be commenced as soon as practicable.

The other proposed methods for supplying the city with water were, to use the water from Bronx River; but that would amount to only ten million gallons a day, and the expense to obtain it he claimed would be greater than the expense of building the Quaker Bridge dam; another, to bring the water from Byron River, Connecticut; another, from the Adirondacks; another, to dig wells; still another, to use salt water for washing streets and putting out fires. None of these methods, however, were at present before the public for consideration.

That part of the question which interested the Committee on Hygiene most at the present moment was the purity of the Croton water. Dr. Peters had received papers from the Board of Health, mentioning in detail the sources of impurity of the Croton River, arising from the sewage of barn-yards, villages, and factories situated on its banks or its tributaries.

Later he offered resolutions, which were passed, asking the Water Commissioners, and others who were supposed to have power, to institute some method for keeping pure the Croton water.

Dr. Laurence Johnson had made some dredgings which went to show that the deeper lake- and pond-water was, the colder and freer from vegetable matter it was likely to be. This had a bearing on the proposed Quaker Bridge dam, which would hold water of great depth.

CONTAGIOUS EYE-DISEASES.

Dr. JOSEPH A. ANDREWS, the author of the paper, said he did not hope to bring forward anything really new, but he would refer to some views already advanced, support them by additional evidence, and apply them to a number of diversified facts.

The contagious eye-diseases of which he treated were contagious blennorrhœa, especially in the chronic or less acute forms as seen so commonly in our public institutions; and, second, ophthalmia neonatorum, which he regarded as undoubtedly gonorrhœal. He spoke of the ravages of the so-called Egyptian ophthalmia as it had existed in armies, and also of the more chronic forms of contagious ophthalmia, of trachoma, and pointed out the importance of the subject in relation to the protectories and other institutions in this city.

Dr. Andrews had been unable to confirm Sattler's views regarding the bacteria theory of the disease. The ophthalmia of the newly-born he regarded as gonorrhœic, but it was his belief that it seldom occurred during the birth of the child unless labor were protracted; the contagion was introduced usually after birth, during the first washing, or from the mother's fingers which had been in contact with the soiled linen, etc. Dr. Andrews's treatment consisted in the use of a two per-cent. solution of nitrate of silver, and cold-water lotions. He thought it important to have the bill now before the Legislature, relating to contagious eye-diseases in institutions, passed.

Dr. D. B. ST. JOHN ROOSA said that most of the cases of contagious eye-disease in our asylums were of a chronic character; but a large majority of the children recover. The matter was sufficiently serious, however, to require correction. He did not put much faith in the bacteria theory of disease. He did not approve of the use of a solution of nitrate of silver, as the author had recommended: cold lotions were sufficient; even mild astringents, such as alum, might be uncalled for.

Dr. DERBY, Dr. POMEROY, Dr. MITTENDORF, Dr. WEBSTER, Dr. LESZYNSKY, and Dr. WEEKS continued the discussion. Dr. Leszynsky had traced a number of cases of contagious eye-disease in one institution to inmates who had leucorrhœa. Dr. Weeks upheld the so-called gonococcus theory, and explained the benefit obtained from nitrate of silver solutions, cold, etc., on the basis that they destroyed the gonococcus.

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held February 10, 1886, the President, JOHN A. WYETH, M.D., in the chair.

ATHEROMA OF THE CORONARY ARTERIES CAUSING PARTIAL OCCLUSION AND ENDOCARDITIS.

Dr. T. MITCHELL PRUDDEN presented a heart illustrating chronic endocarditis with interstitial myocarditis, as a result of partial atheromatous occlusion of the coronary arteries. He presented the specimen because it was a very good illustration of the lesions described, and because also it was a good example of that class of cases in which patients having a serious lesion of an important organ got along very well until some intercurrent disease set in, disturbing the balance, and they then died of the original disease. The intercurrent disease in this case was pneumonia, which had begun to undergo resolution.

Dr. W. M. CARPENTER inquired whether microscopical examination was made of the arterioles of other organs of the body,—for example, of the kidneys.

Dr. PRUDDEN replied in the negative,—that the diagnosis of renal disease was based on the gross appearances.

Dr. CARPENTER said he asked the question because some papers had recently appeared, discussing the relation of general fibroid degeneration of the arterial system and Bright's disease of the kidneys. He had examined the blood-vessels of kidneys removed from the bodies of persons who had given the ordinary history of chronic Bright's disease in a number of cases, and in a certain proportion of them, at least, he had found no particular change in the arteries. It was very true the examination was not made specially with reference to determining this point, yet it was fairly reliable as having been done in the line of instruction in the laboratory of the University. But in other cases in which persons had died of chronic Bright's disease or chronic diffuse nephritis the arteries exhibited very marked changes not only in the external coat, but also in the intima, so that there were at least exceptions to what had been stated as a rule, that fibroid degeneration of the blood-vessels was a part of the morbid anatomy of chronic diffuse nephritis.

Dr. PRUDDEN thought he could concur in Dr. Carpenter's remarks, but in this particular case the lesion in the coronary arteries seemed to be local. There was no general atheroma.

Dr. CARPENTER said that was the reason he asked the question, because this case seemed to be an illustration of the fact that such fibroid degeneration of the arteries might be local, and one point which he wished to make was that it was not a rule of general application that because fibroid degeneration existed in the arteries of one part it must necessarily exist throughout the arterial system in general. The other point was that fibroid degeneration of the arteries, or arterio-capillary fibrosis, was not necessarily a part of the morbid anatomy of Bright's disease.

Dr. PRUDDEN and Dr. WALDSTEIN had made examinations in some cases of death from chronic Bright's disease in which there was absence of general fibroid degeneration of the arteries.

ACUTE PRIMARY SUPPURATIVE NEPHRITIS.

Dr. L. E. HOLT presented specimens removed from the body of a child aged 7 months, which died after an acute illness of three weeks' duration. At first the symptoms were obscure, but later there developed all the symptoms of meningitis, and there also appeared in the urine albumen and a great number of a variety of casts, also some pus and blood. There was a family history of tuberculosis, and the symptoms seemed to point definitely to acute general miliary tuberculosis. At the autopsy, however, he found no tubercles anywhere. There were three ounces of fluid in the cerebral cavities, and marked cerebral congestion. There was moderate broncho-pneumonia. The heart, liver, and kidneys were larger than usual. The kidneys showed marked acute suppurative nephritis, believed to be primary.

Being asked how he collected the urine, Dr. Holt said by putting a clean sponge under the diaper.

Dr. CARPENTER suggested the application of flannel wrung out of hot water over the hypogastric region to induce urination in children.

REVIEWS AND BOOK NOTICES.

A SYSTEM OF PRACTICAL MEDICINE BY AMERICAN AUTHORS. Edited by WILLIAM PEPPER, M.D., LL.D., assisted by LOUIS STARR, M.D. Volume IV. Diseases of the Genito-Urinary and Cutaneous Systems, Medical Ophthalmology and Otology. Philadelphia, Lea Brothers & Co., 1886. Sheep, 8vo, pp. 877.

The first two-thirds of the present volume is occupied by Diseases of the Genito-Urinary System, to which Robert I. Edes, M.D., contributes the initial essay, on "Diseases of the Kidneys, including the Pelvis of the Kidney;" Francis Delafield, M.D., on "Diseases of the Parenchyma of the Kidneys and Perinephritis;" James Tyson, M.D., on "Hæmaturia, and Hæmoglobinuria or Hæmatinuria," and on "Chyluria;" Edward L. Keyes, M.D., on "Diseases of the Male Bladder;" Samuel W. Gross, M.D., on "Seminal Incontinence;" Edward C. Dudley, M.D., on "Displacements of the Uterus;" J. C. Reeves, M.D., on "Disorders of the Uterine Functions, including Amenorrhœa, Dysmenorrhœa, and Menorrhagia;" B. F. Baer, M.D., on "Inflammation of the Pelvic Cellular Tissue and Pelvic Peritoneum;" T. Gaillard Thomas, M.D., on "Pelvic Hæmatocele;" William H. Byford, M.D., on "Fibrous Tumors of the Uterus, Sarcoma of the Uterus, and Carcinoma of the Uterus;" William Goodell, M.D., on "Diseases of the Ovaries and Oviducts;" Alex. J. C. Skene, M.D., on "Diseases of the Urinary Organs in Women;" Edward W. Jenks, M.D., on "Diseases of the Vagina and Vulva;" William W. Jaggard, M.D., on "Disorders of Pregnancy, Functional Disorders connected with the Menopause, Diseases of the Parenchyma of the Uterus, Metritis and Endometritis, including Leucorrhœa;" and George J. Engelmann, M.D., on "Abortion."

A brief section on Diseases of the Muscular System, although not strictly belonging to this volume, has been placed here for convenience. J. C. Wilson, M.D., contributes an article on "Myalgia," James Tyson, M.D., one on "Progressive Muscular Atrophy," and Mary Putnam Jacobi, M.D., one on "Pseudo-Hypertrophic Muscular Paralysis."

The chapter on Diseases of the Skin, occupying one hundred and fifty-four pages, is supplied by Louis A. Duhring, M.D., and Henry W. Stelwagen, M.D.; Medical Ophthalmology is reviewed in seventy pages by William F. Norris, M.D.; and Medical Otology by George Strawbridge, M.D., in thirty-six pages. Like the preceding volumes, this one concludes with a copious index, which would have been more convenient for reference with regard to diseases of the skin if the alphabetical arrangement had been adhered to throughout. The present volume, though less comprehensive than some of the others, is equally direct and practical in its treatment of the special topics considered.

PRACTICAL HUMAN ANATOMY: A Working-Guide for Students of Medicine, and a Ready Reference for Surgeons and Physicians. By FANEUIL D. WEISSE, M.D. Illustrated by Two Hundred and Twenty-two Lettered Plates, containing Three Hundred and Twenty-one Figures. New York, William Wood & Co., 1886. 8vo, cloth, pp. 456.

This work will be warmly welcomed both by the medical practitioner who desires a ready work of reference, and by the student who needs a good dissector. The text is clear and concise, while the letter-press and illus-

trations leave nothing to be desired. The subject is presented in twenty-seven dissections, commencing with the perineum and ending with the brain, of which there are a number of very fine illustrations. The fidelity to nature and the artistic excellence of the cuts, which are all original, are noteworthy. They rival the plates in large anatomical quartos, which are to be looked upon rather as luxuries than necessities by the ordinary doctor. Photo-engraving and printing have been resorted to, with the result of furnishing a set of illustrations far superior to those ordinarily seen in text-books on anatomy. Taken as a whole, this book is one which reflects high credit upon American medicine.

A MANUAL OF AUSCULTATION AND PERCUSSION. Embracing the Physical Diagnosis of Diseases of the Lungs and Heart, and of Thoracic Aneurism. By AUSTIN FLINT, M.D., LL.D. Fourth Edition, Thoroughly Revised and Enlarged. Illustrated with Fourteen Wood-Cuts. Philadelphia, Lea Brothers & Co., 1885. Cloth, 12mo, pp. 280.

This manual seems to maintain its position in the estimation of the profession. Taking advantage of the exhaustion of the large edition published only two years ago, the author has made some important modifications and considerable additions in the endeavor to make it more useful by a thorough revision. In addition to the wood-cuts of former editions, some diagrammatic illustrations have been introduced which increase the practical value of the work. As the substance of the lessons given by the author to his classes, both to medical students and to practitioners, it is natural that a demand should exist for successive editions of this hand-book, especially when, as here, each is better than the last.

NEW BOOKS.

SEVENTH ANNUAL REPORT OF THE STATE BOARD OF HEALTH OF ILLINOIS. With an Appendix. Springfield, 1885.

THE DIAGNOSIS AND TREATMENT OF DISEASES OF THE EAR. By OREN D. POMEROY, M.D. With One Hundred Illustrations. Second Edition, Revised, with Additions. New York, D. Appleton & Co., 1886. 8vo, cloth. Pp. 413.

LOCAL ANÆSTHESIA IN GENERAL MEDICINE AND SURGERY: Being the Practical Application of the Author's Recent Discoveries. By J. LEONARD CORNING, M.D., etc. New York, D. Appleton & Co. 8vo, cloth. Pp. 103.

THE SUPRAPUBIC OPERATION OF OPENING THE BLADDER FOR THE STONE AND FOR TUMORS. By SIR HENRY THOMPSON, F.R.C.S., etc. London, J. & A. Churchill, 1886. 8vo, cloth. Pp. 57.

DRAINAGE FOR HEALTH; OR, EASY LESSONS IN SANITARY SCIENCE. By JOSEPH WILSON, M.D. Second Edition, with Important Alterations. Philadelphia, P. Blakiston, Son & Co., 1886. 8vo, cloth. Pp. 74.

THE YEAR-BOOK OF TREATMENT FOR 1885. A Clinical Review for Practitioners of Medicine and Surgery. Philadelphia, Lea Brothers & Co. Cloth, 12mo. Pp. 311.

REPORT OF THE COMMISSIONER OF EDUCATION FOR THE YEAR 1883-84. Washington, D.C., 1885.

CIRCULARS OF INFORMATION OF THE BUREAU OF EDUCATION. No. 4. 1885. EDUCATION IN JAPAN. Washington, 1885.

NEW REMEDIES AND CLINICAL NOTES.

THE INFLUENCE OF MILK DIET ON THE EXCRETION OF ALBUMEN IN CHRONIC NEPHRITIS.—In view of the fact that milk diet had been emphatically recommended by many observers (Senator, Sparks and Bruce, etc.), Dr. A. S. Trubatcheff (*Vratch*, No. 46, 1885, p. 763) undertook a series of comparative observations on four patients with chronic nephritis (three with the parenchymatous and one with the interstitial form), each of whom received ordinary hospital diet during one period, and either mixed or pure milk diet during a subsequent period of equal duration. The results were as follows. 1. An exclusive milk diet invariably led to a marked increase in the daily and percentage amount of albumen in the urine. 2. The patient's weight fell considerably, without any marked change in his dropsical state. 3. A mixed milk diet also led, in the majority of the cases, to an increase in the daily and percentage amount of the albumen excreted. 4. Neither pure nor mixed milk diet produced any marked increase in the amount of urine. The author now studies the assimilation of protein by nephritic patients receiving milk diet, which study will enable him to settle the question of "good or harm" of the treatment. —*London Medical Record.*

A NEW LOCAL ANÆSTHETIC.—The *Medical News* states that Dr. Lewin has found a resinous extract, obtained from the root of Piper methysticum, to be a local anæsthetic of considerable power. The extract is soluble in alcohol, possesses a somewhat aromatic taste, and leaves upon the tongue a sensation of pricking and burning, soon lost in supervening local insensibility. Complete insensibility of the cornea and conjunctiva resulted from the introduction of a very small amount of the extract into the eye of an animal. Hypodermic injections produced local anæsthesia. The constitutional effects of the drug on man are said to resemble those produced by coca. —*Druggists Circular.*

NAPHTHALINE IN DYSENTERY.—In the *Voënno-Sanitarnoë Delo*, No. 46, 1885, p. 514, Dr. Novikoff writes that he has admitted to the lazaretto of the Ninth Grenadier Regiment thirteen cases of more or less severe dysentery, and treated twelve of them by naphthaline in five-grain doses from three to six times daily. All the twelve recovered after several days' treatment. As a rule,

within from twelve to thirty-six hours after the first dose there appeared a striking relief of pain and tenesmus, and then a rapid fall of temperature followed. A thirteenth patient was treated by calomel and ipecacuanha, and died. The single inconvenience of the naphthaline-treatment is the disgusting odor of the drug, which often causes vomiting. To prevent the latter, Dr. Novikoff advises that naphthaline should be administered in isinglass capsules (capsulæ operculatæ).—*London Medical Record.*

AMMONIA IN ANTHRAX AND CARBUNCLE.—Dr. Leonidas Avendano regards ammonia as a specific in anthrax and "carbunculous diseases." In cases of malignant pustule he advises that, after an incision has been made, some drops of official solution of ammonia be introduced into the wound, with the hope of destroying the bacilli there, and that the ammonia will find its way into the circulation before the bacilli do, converting the blood into a fluid in which the germs cannot multiply. Some ammonium salt, as the acetate, may also be given internally.—*Druggists Circular.*

ARSENIOUS ACID IN HEMORRHAGIC MALARIAL FEVER.—Dr. B. H. Riggs, of Selma, Alabama, reports (*Medical News*, February 27) an interesting case of a white boy suffering with hemorrhagic malarial fever. Calomel followed by salines was given, hot baths, and the following prescription:

℞ Acidi arseniosi, gr. ¼;
Piperinæ, gr. ij;
Pulv. Doveri, gr. x;
Ext. hyoscyami, gr. v. M.

Five capsules.

One capsule taken every three hours until some œdema was observed, when the remedy was given at longer intervals. In thirty-five hours half a grain of arsenic was thus administered. Dr. Riggs noted a prompt improvement, and is disposed to believe that full doses of arsenic constitute the best treatment for this usually fatal disease.

INFUSION OF RAGWEED FOR HEMORRHAGE.—Dr. J. H. Hill, of Goldsborough, contributed to the last volume of Transactions of the Medical Society of North Carolina some very interesting notes on the virtues of ragweed (*Ambrosia artemisiæfolia*) in checking hemorrhage. One of the cases he reports was an instance of purpura, in which blood escaped from the nostrils, gums, and kidneys. The patient, a child six years of age, had been bleeding for several days, and the usual remedies had been exhausted, when Dr. Hill resorted to infusion of ragweed, with prompt cessation of the hemorrhage. The family to which the boy belonged bled easily, and two of his father's sisters had died with hemorrhages.

RESORCIN FOR CANCER.—A case of epithelioma is said by Dr. Antoni to have been cured by the application of an ointment, twice a day, consisting of fifteen parts of resorcin to twenty parts of vaseline.

MISCELLANY.

AMERICAN MEDICAL ASSOCIATION.—The Thirty-seventh Annual Session will be held in St. Louis, Missouri, on Tuesday, Wednesday, Thursday, and Friday, May 4, 5, 6, and 7, commencing on Tuesday at 11 A.M.

SECTIONS.

Practice of Medicine, Materia Medica, and Physiology: Dr. J. T. Whittaker, Cincinnati, Ohio, Chairman; Dr. B. L. Coleman, Lexington, Kentucky, Secretary.

Obstetrics and Diseases of Women and Children: Dr. S. C. Gordon, Portland, Maine, Chairman; Dr. J. F. Y. Paine, Galveston, Texas, Secretary.

Surgery and Anatomy: Dr. Nicholas Senn, Milwaukee, Wisconsin, Chairman; Dr. H. H. Mudd, St. Louis, Missouri, Secretary.

State Medicine: Dr. John H. Rauch, Springfield, Illinois, Chairman; Dr. F. E. Daniel, Austin, Texas, Secretary.

Ophthalmology, Otology, and Laryngology: Dr. Eugene Smith, Detroit, Michigan, Chairman; Dr. J. F. Fulton, St. Paul, Minnesota, Secretary.

Diseases of Children: Dr. W. D. Haggard, Nashville, Tennessee, Chairman; Dr. W. B. Lawrence, Batesville, Arkansas, Secretary.

Oral and Dental Surgery: Dr. John S. Marshall, Chicago, Illinois, Chairman; Dr. A. E. Baldwin, Chicago, Illinois, Secretary.

A member desiring to read a paper before a Section should forward the paper, or its *title* and *length* (not to exceed twenty minutes in reading), to the Chairman of the Committee of Arrangements at least one month before the meeting.—*By-Laws.*

Committee of Arrangements: Dr. Le Grand Atwood, St. Louis, Missouri, Chairman.

The following amendments to by-laws will come up for consideration:

By Dr. Foster Pratt, Michigan: "Each Section shall nominate its Chairman and Secretary,—all other nominations to be made, as now, by the Nominating Committee."

By Dr. I. N. Quimby, New Jersey: "Create a new Section, to be known as the Section on Medical Jurisprudence."

WILLIAM B. ATKINSON, M.D.,
Permanent Secretary.

ARTIFICIAL MILK.—It is a curious fact that when a fat is boiled with caustic potash in the relation of fifty parts of alkali to one hundred parts of fat, it is gradually dissolved:

the glycerin, however, is not set free. If the alkaline solution is now acidified, the original fat will be regained; but it will have new properties. It is now soluble in alcohol, and when added to ordinary fats, even in very small amounts, it imparts to them the property of forming complete emulsions with extraordinarily dilute solutions of the alkali carbonates. In order to make a liquid which shall possess the appearance and the most important chemical properties of milk, Chichkoff proceeds as follows. Some of the modified fat is added to ordinary fat, and the mixture emulsified with a dilute solution of potassium or sodium carbonate. Calcium and magnesium phosphates are then added in the form of powders, and also a certain amount of casein which has been rubbed up with a little ammonia. Another solution is now made by dissolving milk-sugar in dilute hydrochloric acid and adding a solution of albumen. The two liquids are now cautiously mixed, the acid liquid being poured into the alkaline one, and the mixture well stirred after each addition. This artificial milk does not contain the ferment occurring in natural milk, but if a little sour milk is added to it, a thick layer of cream soon rises which possesses all the properties of real cream and can be worked into butter. The artificial milk also curdles and forms whey. The taste of the milk, however, is not quite as palatable as it might be; but this may be improved by further experimenting. This peculiar power of the modified fat to form emulsions may be of use in pharmacy.—*Druggists Circular.*

HAND-GRENADES.—E. Geissler (*Pharm. C. H.*, 1885, 447) has recently been examining some of the numerous hand fire-extinguishers now to be seen in so many prominent places. The Hayward grenade he finds to contain 750 grams of an aqueous solution of 15.7 per cent. of calcium chloride. The Harden grenade contains 555 gram of liquid which consists of an aqueous solution of 19.46 per cent. salt and 8.88 per cent. ammonium chloride. The editor of *Dingler's Journal* states that Fire Superintendent Kayser tested these articles at Essen on August 12, 1885, and reported that they had next to no effect. Schonberg's "Fire-death" contains 440 grams of an aqueous solution of 1.66 per cent. soda and 6.43 per cent. salt. According to the *Iron Age*, Professor Adar, of the University of Geneva, also analyzed an American hand-grenade, and found it to be an aqueous solution of salt and sal-ammoniac. Mr. Tower, of the Agricultural College of Lansing, Michigan, has recently published a number of experiments on the same subject in the *Sanitary News*. There seems to be no evolution of a fire-extinguishing gas from these grenades, and their only efficiency lies in the salt they contain. That strong brine is superior to water in extinguishing a fire is an old story, but that a dozen bottles of it are worth from six to ten dollars is a fresh and exhilarating novelty. How comical it is to think of steamboats, and ocean steamers, which have difficulty to keep the salt water out of them, buying little bottles at fancy prices!—*Druggists Circular.*

WATER-SUPPLY OF PHILADELPHIA.—At the last meeting of the County Medical Society Dr. Charles Hermon Thomas read a paper on the defects of the present water-supply of the city, and recommended as a temporary expedient that the new sewer, building on the east side of the river, be used as a conduit to bring a purer quality of water to Fairmount basin. A committee was appointed to consider the project, and on the 1st instant Dr. Thomas presented his plan before a meeting of citizens at the Continental Hotel.

The need of the city for better water is urgent, and it is eminently fitting that physicians should constantly agitate the subject until relief is afforded. The plan suggested by Dr. Thomas may be impracticable, but the committee should be continued until a perfectly effective and reliable remedy is adopted to give us an uncontaminated water-supply.

A TONIC EXTRACT OF MEAT.—A combination of citrate of iron with cinchona, gentian, and other tonics, with extract of beef, constitutes Colden's Liquid Beef Tonic (Ext. Carnis Fld. Comp., Colden's), the composition of which, as given by analysis made by Arthur Hill Hassall, M.D., and the late Erasmus Wilson, M.D., appears upon the label of each bottle. It is both a nutrient and a tonic, and may be used in all diseases characterized by impaired assimilation.

NOTES AND QUERIES.

ERRATA.

In the article "A Case of Difficult Diagnosis," on page 373, first column, fifth line, read "tablespoon" instead of teaspoon, and on page 374, second column, twenty-ninth line, read "trace" instead of excess.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM FEBRUARY 14, 1886, TO FEBRUARY 27, 1886.

None.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE U.S. NAVY FROM FEBRUARY 14, 1886, TO FEBRUARY 27, 1886.

SURGEON J. H. CLARK.—Detached from the "Hartford" on the reporting of his relief, Medical-Inspector Bradley.

MEDICAL-INSPECTOR MICHAEL BRADLEY.—Ordered by steamer of March 10 from New York to Aspinwall, thence to Panama, and to the "Hartford" as the relief of Surgeon J. H. Clark.